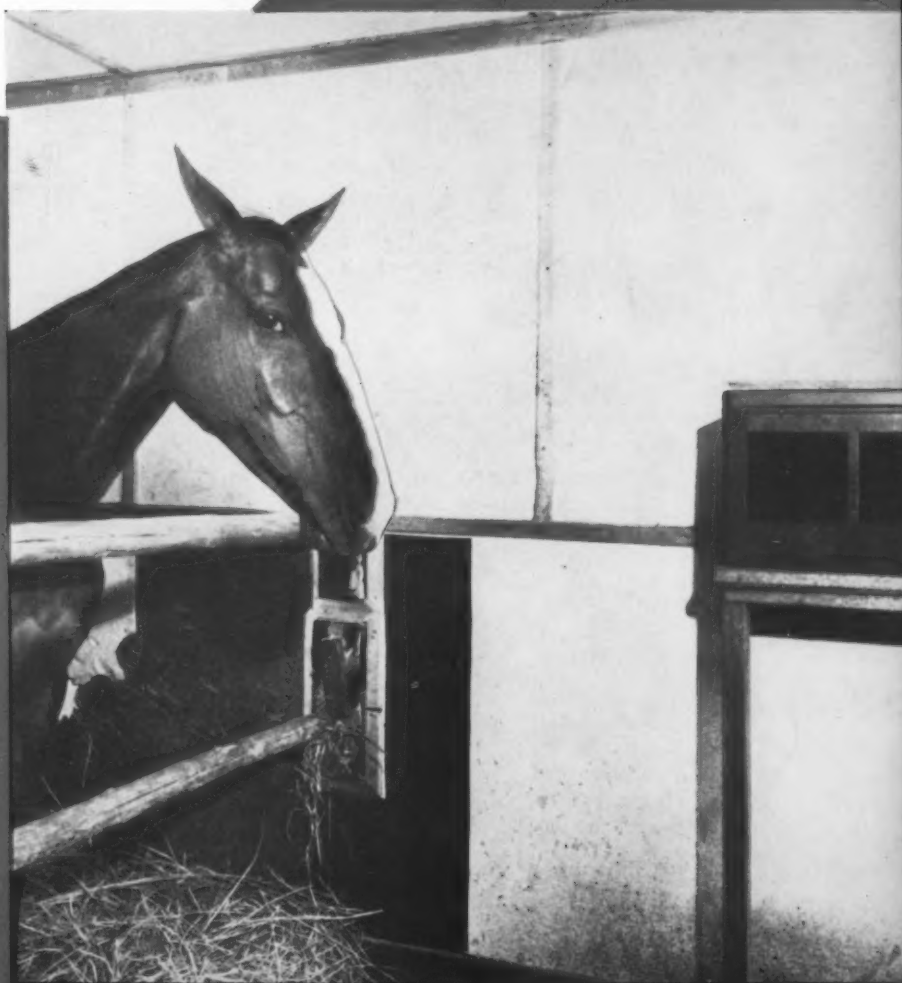


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AUGUST, 1950

Commercial Refrigeration

AND AIR CONDITIONING

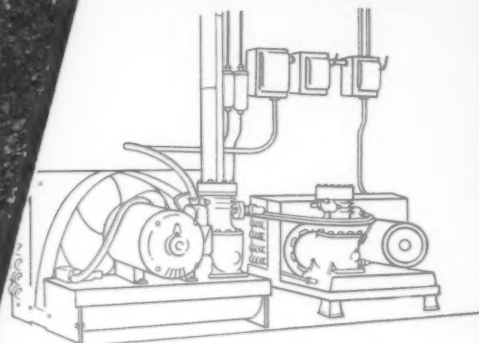


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It pays to install the insulating material you can count on for lasting efficiency.

Good insulation will permit your equipment to operate at peak efficiency.



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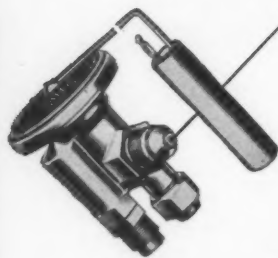


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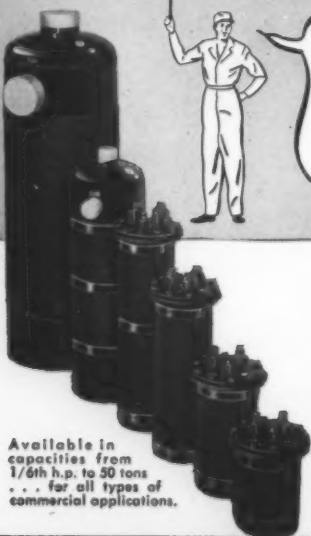
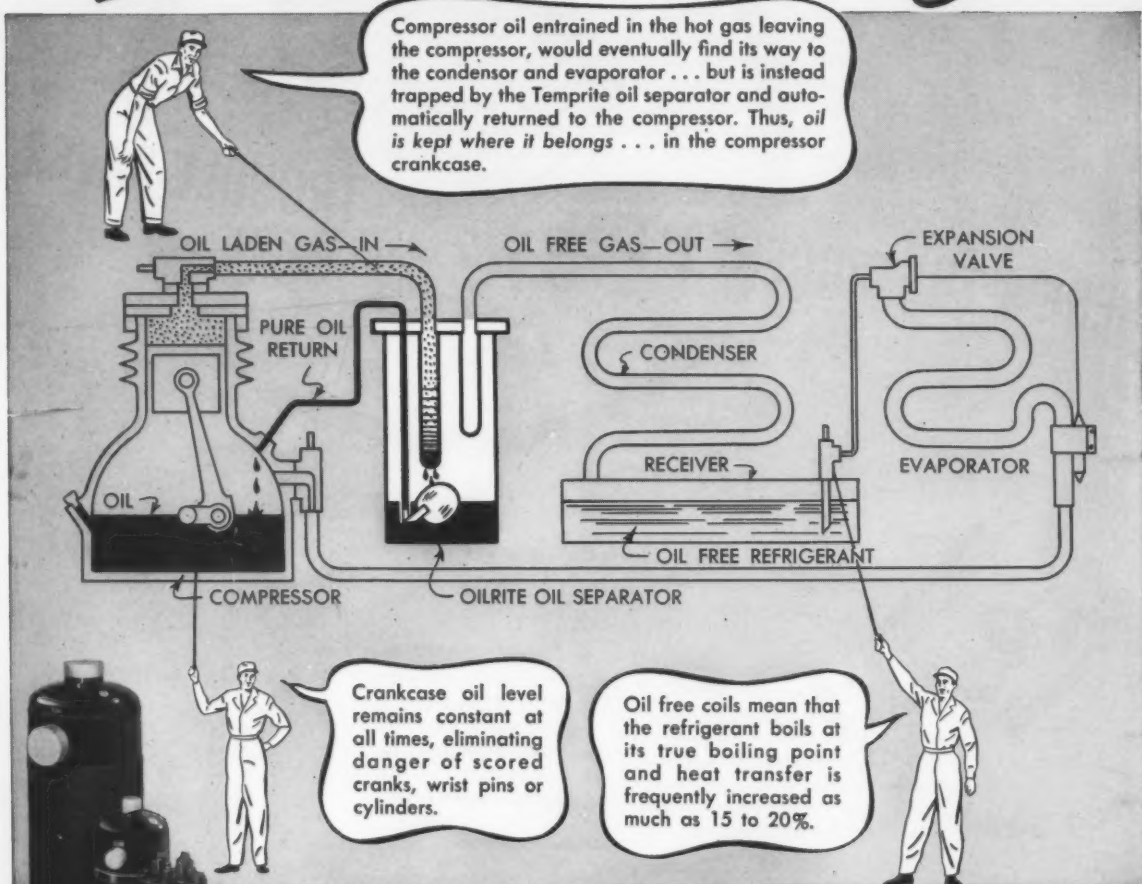
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AUGUST, 1950

VOLUME 7, NO. 8

Commercial Refrigeration

AND AIR CONDITIONING

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THE REFRIGERATION INDUSTRY

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THE COVER . . . The contented gaze of this trim Australian speedster can be attributed to the packaged room air conditioner visible in his stall. This unit—and another like it—have been installed in the stables of the Singapore Turf Club to combat “dry coat”, a condition that sometimes develops in Australian race horses subjected to the humid Malayan climate. When in this state the horse’s sweat glands refuse to function, and the ailment can prove fatal if the horse is raced. (Photo from Frigidaire)

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Published monthly by REFRIGERATION PUBLICATIONS, INC., an affiliate of INDUSTRIAL PUBLISHING CO., publishers of APPLIED HYDRAULICS, DIE CASTINGS, FLOW, INDUSTRY & WELDING, OCCUPATIONAL HAZARDS, and THE TANKING INDUSTRY. Member, Controlled Circulation Audit, Inc., and National Business Papers Association. Not responsible for unsolicited editorial material.

Subscription rates: United States and possessions—\$3.00 per year, \$5.00 for 2 years; Canada—\$4.00 per year, \$6.00 for 2 years; Foreign—\$5.00 per year. Single copy price, 30 cents. All subscriptions subject to individual acceptance by the publisher.

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- How do you select the right size unit? Answer on page 7.
- How do you clean the low side? Answer on page 10.
- How do you charge the system? Answer on page 11.
- What are control systems for different applications? Answer on page 15.
- What are the electrical connections? Answer on page 23.



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see

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- **Dependability**
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see

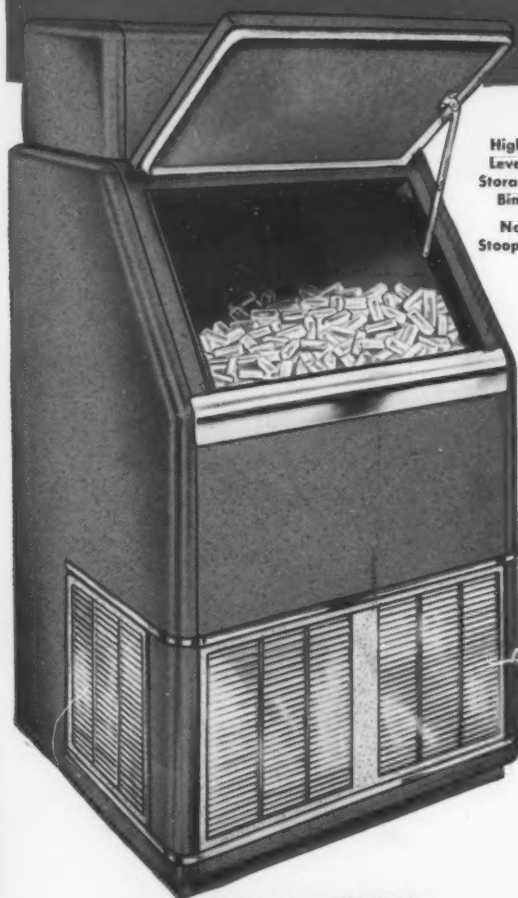
the five simple trouble-shooting diagrams for how-to-fix-it information.

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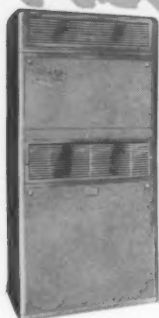
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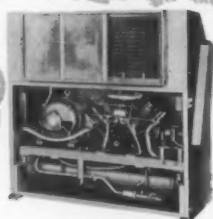
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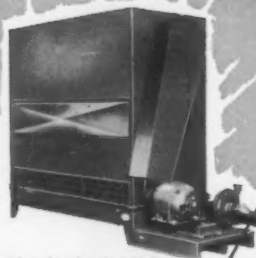
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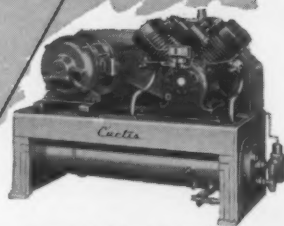
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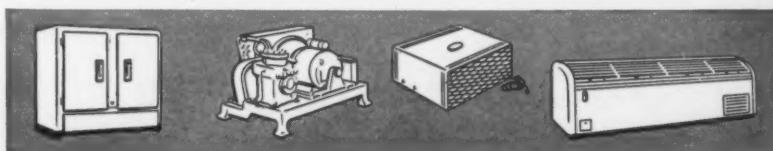
THERE'S REAL PROFIT FOR DEALERS in the new Carrier Automatic Ice Cube Maker. Listed above are three of many features that make it a best seller. And here's added proof it's a hit with customers. One user reports: "Our Carrier unit cut our ice cube bills from \$55 to \$9 a month." An-

other writes: "Our unit will pay for itself from savings within eight months." There's still a wide-open market for this money-maker. Dealer markups are liberal. And Carrier backs it with strong advertising and promotion. Carrier Corporation, Syracuse, New York.

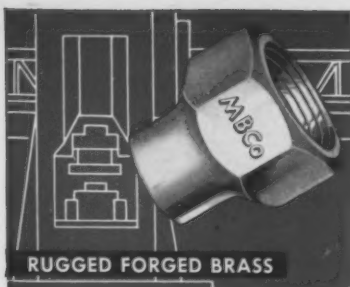
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LIKE THE LINKS IN A CHAIN — Your refrigeration equipment is no stronger than your weakest connection — and strong, dependable connections can only be made with fittings that are designed specifically for that job.

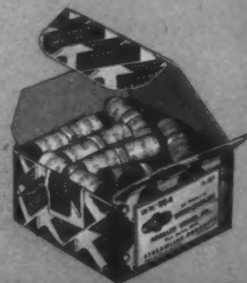
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All Mueller Brass Co. STREAMLINE Fittings are manufactured exclusively to strict S.A.E. Refrigeration Standards. Their rugged forged brass

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HOUSING—Heavy 10 gauge sheet steel, with 3 coats Bitumastic lining, and 4 coats of outside special weatherproof paint. No zinc or alloys used, eliminating electrolysis or possibility of galvanic action. Electrically welded cabinet.

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OFFICES: Bessemer Building, Pittsburgh 22, Pa.

AUGUST, 1950 • COMMERCIAL REFRIGERATION

LETTERS

Check Valves Would Halt Hot Gas Feed Back

EDITOR:

On page 75 of your June issue is an answer to a hot gas defrost problem which, in my mind, is not quite clear. I am wondering what will keep the hot gas from feeding back through the suction line and defrosting both plates at once.—Lloyd H. Long, Horney's, Norton, Kansas.

In discussing this problem, the editor of the *Practical Refrigeration Applications Manual* was assuming that there would be relatively little likelihood that the hot gas would be exchanged through the suction line between the bank being defrosted and the other bank of coils. However, he points out, if it should be found that the hot gas did tend to feed back through the suction line to the other set of plates, a very simple remedy would be to place a check valve in the suction line coming from each bank of coils. This check valve would prevent hot gas feeding back into either bank of plates from the other.

Added Equipment Often Upsets System Balance

EDITOR:

I have been an interested reader of your *Practical Refrigeration Applications Manual* for several years.

My problem is somewhat different from those usually handled, but perhaps you can help.

By way of background on myself I have fifteen years refrigeration experience, the past three years as soda fountain and cabinet service man for an independent ice cream company. I have approximately 300 refrigerated fixtures to maintain, mostly low temperature, covering six counties.

The ammonia system in our plant has been expanded, in five years, from one 15-ton machine to three machines of 15, 20 and 30 tons respectively. The owners, who formerly had little trouble maintaining the single compressor and its associated equipment, now have a pretty complicated refrigeration setup and it is not too easy to diagnose trouble on multiple fixtures including ice cream trucks, medium and low-temperature storage rooms, brine and water coolers, freezers, etc.

I have found my basic knowledge of refrigeration useful in "pinpointing" troubles in the plant and am called upon in this regard.

O. K., now for the problems:

1. What is the procedure for testing the efficiency of a 30-ton ammonia compressor

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LETTERS

as compared to similar tests on fractional H.P. Freon-12 compressors?

2. Can you refer me to books or other printed matter on service and maintenance of ammonia refrigerating equipment?—R. C. Power, Jr., Schneider's Creamery, Inc., Eustis, Fla.

Procedure for testing efficiency of a 30-ton ammonia compressor as compared with testing a low pressure Freon 12 compressor, according to our Manual editor, would be identical. Both compressors are constructed along similar lines, although one, of course, is considerably larger than the other. Both work on the same principle, however, so efficiency tests would be made along the same line.

Where condensing unit equipment has been added to a system, as you outline in your letter, that overall efficiency of the complete system often is lost due to a lack of balance for the entire system, particularly if the new units are added to the original lines rather than set up as a separate, complete system covering new rooms added. The trouble you are having may be due to line loss, inadequate condensing surface, or shortage of evaporator surface. Once you have determined that the compressor itself has the proper efficiency, we would suggest that you look for your trouble in other component parts of the system.

It will, of course, be necessary for you to secure the manufacturer's capacity ratings for the unit under the conditions it is operating in the system. Frequently, where two or more compressors are set up in series in a system, one or more will not deliver full efficiency because of short-ages in components in the system or because of improper refrigerant line layouts for the entire system.

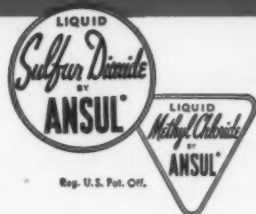
In answer to your second question, why don't you write to National Association of Practical Refrigerating Engineers, 435 N. Waller Ave., Chicago 44, Ill.; National Association of Refrigerated Warehouses, 1005 E St., N.W. Washington, D. C.; or the manufacturer of the ammonia compressor involved in your problem?

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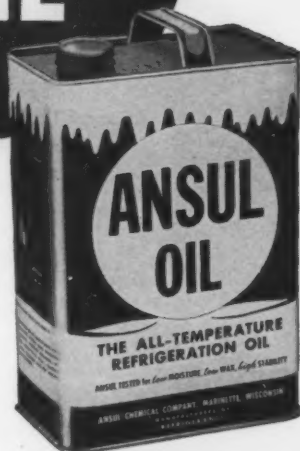
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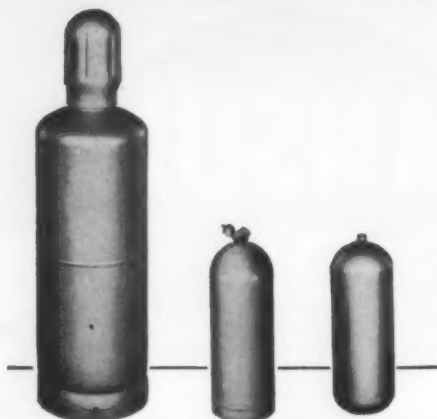
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
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The full line of Copeland units . . .
open-type or Copelametic in every
size from 1/6 H.P. through 7 1/2 H.P. . . . gives
you more prospects.

Every size of Copelametic combines the best
features of all types of condensing units. Belts,
seals and manual oiling are eliminated, yet
Copelametic motor-compressors are easily acces-
sible. Any adjustment or replacement of parts

can be made in the field . . . a big service advantage.

Copeland's national advertising and reputa-
tion for dependability are additional sales tools.
Copeland's compact, sturdy design meets require-
ments for unit size, dependability and economi-
cal operation. Display and sell the new, complete
Copeland line.

COPELAND REFRIGERATION CORPORATION • SIDNEY, OHIO

Manufacturers of
REFRIGERATION UNITS (OPEN-TYPE AND COPELAMETIC), WATER COOLERS, REFRIGERATORS

ONLY THE SPORLAN CATCH-ALL FILTER-DRIER

offers you

both

SPORLAN

**GREATEST FILTERING
AREA
HIGHEST DEGREE OF
ACTIVATION**

Size for size, the Sporlan Catch-All with its scientifically molded porous cylinder offers the greatest filtering area because its end surface is augmented by its complete cylindrical surface into a tri-dimensional filtering area, filtering out any foreign matter as minute as 9 microns with negligible pressure drop!

Sporlan Catch-Alls are activated to the highest degree of dryness after they are completely assembled by subjecting them to a temperature of over 500° F. for a minimum of four hours! The Sporlan Catch-Alls are then sealed with moisture proof seals to prevent any loss of activation before installation.

When you want perfectly clean,
perfectly dry refrigeration systems . . . install

SPORLAN Catch-Alls
the perfect filter-driers and GET PEAK
PERFORMANCE ON ALL INSTALLATIONS

Catch-Alls are available in all sizes at
all Sporlan wholesalers

SPORLAN
VALVE COMPANY

7525 SUSSEX AVENUE • • • ST. LOUIS 17, MISSOURI



**AND HERE ARE 5 ADDITIONAL
EXCLUSIVE CATCH-ALL FEATURES**

1. They cannot powder!
2. They cannot pack!
3. The refrigerant cannot channel around the desiccant!
4. The unique, porous Catch-All cylinders are molded of minute particles of a highly efficient desiccant, the efficiency of which is greater than that of the same desiccant in granular form.
5. They dry down to a low end point...a point so low that any remaining moisture is absolutely harmless!

1st choice for accuracy and dependability— FRIGIDAIRE "YL" SWITCHES GIVE RESULTS YOU CAN'T SURPASS!



Yes, you insure years of efficient operation when you install a Frigidaire "YL" Switch. These rugged switches are easily adaptable to almost any job—fast-acting, fully automatic. And their increased current-handling capacity—result of a unique operating mechanism—has earned high electrical ratings from Underwriters' Laboratories. Each model covers a wide temperature range, can be used with Freon-12, SO₂, or methyl chloride.



Builds Customer Goodwill!

"Prompt, courteous service and use of dependable Frigidaire Service Parts are the two big factors that have built up our customer goodwill," says Chris Gaum, service manager, William H. Day Company, Louisville, Ky.



Finds Frigidaire Parts Are Easiest To Install!

"22 years of experience have proved to me that Frigidaire Parts are easiest to install—and give customers best results possible," says J. R. Patch, Drexel Hill, Pa. "I also like their ready availability."



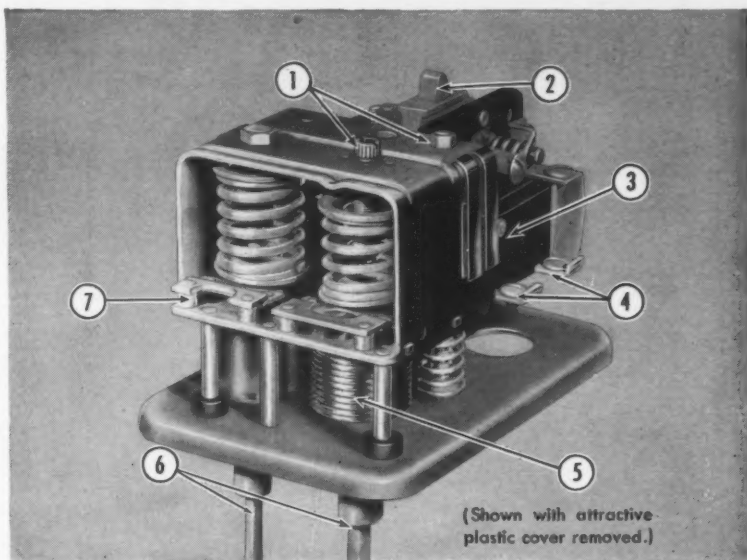
Assures Good Service!

"We've always felt that doing a good service job was the best way to build goodwill and future sales. That's why we use only genuine Frigidaire Parts," says Tom Markham, Markham Appliance Co., Santa Ana, Calif.

Free! New 1950

Frigidaire Parts Catalog

For up-to-date information about all Frigidaire Service Parts and Accessories, write today for your new 1950 Frigidaire Parts Catalog.



(Shown with attractive plastic cover removed.)

1. Adjusting screws are easily reached.
2. Built-in overload protector (optional).
3. Silver-alloy contacts are fully enclosed.
4. Easily accessible electrical connections.
5. Sensitive control bellows cannot become oil-logged.
6. Pressure connections located outside of enclosure.
7. High pressure cutout mechanism (optional).

Frigidaire "YL" Switches can be mounted in any position, used with single phase, polyphase, and DC motors. Protective plastic case is insect-proof. Motor overload protection optional. Available at your nearby Frigidaire Parts Distributor.

FRIGIDAIRE Service Parts and Accessories



FRIGIDAIRE DIVISION
GENERAL MOTORS CORPORATION
1471 Amelia Street, Dayton, O.
(In Canada, Leaside 12, Ont.)

Please rush my free copy of your 1950 parts catalog—"Genuine Precision-Built Frigidaire Parts and Accessories."

Name.....

Firm Name.....

Address.....

City.....County.....State.....



TOPS

IN THE FIELD!



THERMOBANK

Reg. U.S. Pat. Off.

by **KRAMER**

The outstanding development
in the refrigeration field in
the past decade.

The standard of the industry
for complete automatic defrost-
ing at temperatures below 32°.

**SPECIFY
THE BEST..
SPECIFY....**

Write for Bulletin R-124

THERMOBANK

---THE STANDARD OF THE INDUSTRY

KRAMER TRENTON CO. *Trenton 5, N. J.*

THERMOBANK - COOLMASTER - RADIAL UNITS - PANEL UNITS - CUBERS - FINNED COILS - BARE TUBE COILS - HEAT INTERCHANGERS -
CONDENSERS Air Cooled, Water Cooled, Evaporative - WATER COOLING EVAPORATORS - BLAST COOLING COILS - BLAST HEATING COILS.

EVERYWHERE, U.S.A.

Servel Supermetic Wholesale Parts Suppliers



YOU CAN'T AFFORD TO WAIT—neither can your customers—when delay may mean spoilage of valuable merchandise, loss of patronage and profits.

AND YOU NEEDN'T WAIT—if the equipment is powered by a Servel Supermetic. Whether it's a simple control or valve that's needed—a new power unit assembly—or even a complete unit—you can obtain it quickly—when time counts most.

WHEREVER YOU ARE LOCATED—there's an authorized Servel wholesaler nearby, ready to supply you with genuine parts on short notice. He carries a complete stock—power units, accessories, complete condensing units.

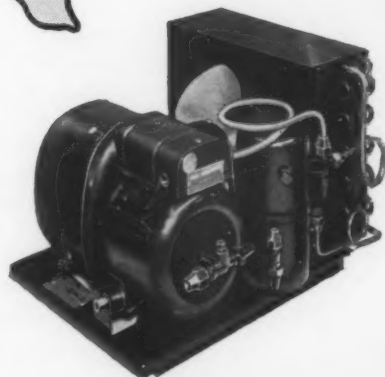
TAKE THIS STEP TOWARD BETTER SERVICE—INCREASED PROFITS. Mail the coupon now. Learn where your nearest Servel parts depot is located—learn the full story of Servel's Supermetics, "performance insured" in all fractional sizes ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$ and $\frac{3}{4}$ H.P.) by a sensational new Five-Year Protection Plan. It's the most complete profit-package that's ever been offered!

Servel

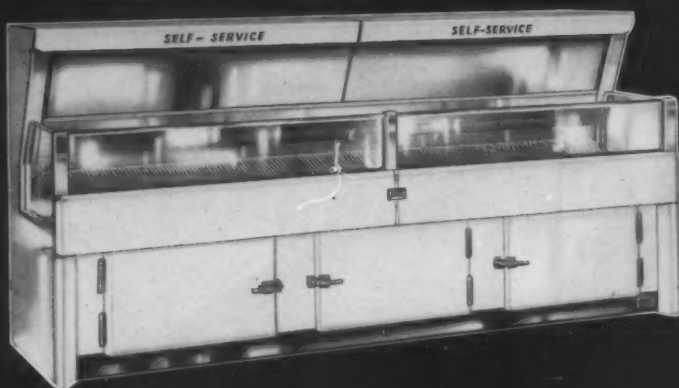
SUPERMETIC

Models for every electric refrigeration
and air conditioning use . . . $\frac{1}{4}$ to 5 H.P.

and AIR CONDITIONING • AUGUST, 1950



- • • • •
- Servel, Inc.
- Electric Refrigeration Division
- Department C-8, Evansville 20, Ind.
- Send full details about Servel Supermetic and
- name of nearest wholesale parts supplier.
- Name.....
- Title.....
- Company.....
- Address.....
- City..... Zone.... State.....



*a Koch case with a problem**



MARKET MEN CAN'T KEEP IT FILLED!

Sounds like exaggeration, doesn't it? It isn't. In busy markets, it calls for vigilant servicing . . . to keep this KOCH open front case filled. Because customers see, and want, and buy!

Of course, market men . . . and dealers . . . don't mind that problem! And there is only one answer: add a second case . . . load it up, and let the cash registers ring up the sales and profits!

This fine self-service case will result in more sales and more turnover. It will encourage valuable impulse purchases. It will complete more sales in less time, and with less store labor. More customers can be served, especially at rush hours.

And it will provide dependable, economical refrigeration.

The KOCH Model 5710 is ideal for pre-packaged fresh meats . . . and also for produce, dairy products, delicatessen, and bottled beverages.

There are sales opportunities in every business block for you. Get the details on this new case and the entire KOCH line, today!

HEIGHT: 56-in. high overall.

LENGTH: 10-ft. In multiple lineups, each individual section occupies 110 3/4 in.

FINISH: Porcelain enamel applied to genuine enameling iron, combined with polished stainless steel and Dulux. Copper-back mirror.

REFRIGERATION: Designed for remote operation. Normally requires 3/4 h.p. unit.

GLAZING: Genuine Thermopane panels made up of two thicknesses of glass.

LIGHTING: Full length fluorescent lighting system.

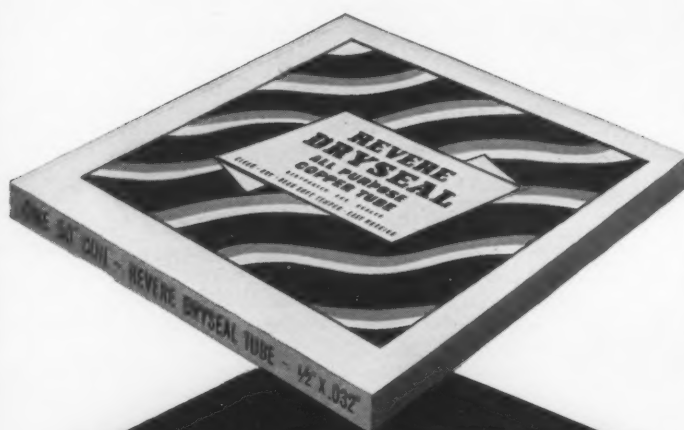
KOCH

SINCE 1883

REFRIGERATORS

NORTH KANSAS CITY 16, MO.

NOW! REVERE DRYSEAL REFRIGERATION TUBE



**LIGHT WEIGHT
EASIER TO HANDLE
ECONOMICAL
CONVENIENT**

You've asked for it, now here it is... the famous Dryseal Refrigeration Tube in a new, handy, attractively designed carton containing one 50-foot coil... easier to handle, light weight, economical, convenient.

But the new carton is only one of the many reasons for specifying Dryseal by name when you order from your distributor. For you really can do things with this tube. Intricate bends can be made by hand with little effort. Dryseal can be flared for compression fittings without splitting. Its ductility and soft temper make sure of that.

Another important feature is the absence of moisture in Dryseal. A special, precise, mechanical double-crimp seal made at each end of the tube when it is manufactured keeps the inside completely bone-dry and free from dirt. What's more, this seal is made in such a way that it does not change the diameter of the tube. This makes it possible to pass the tube through any opening large enough for the tube itself.

Dryseal is now made to new, more economical dimensional standards, with tube sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ " O.D.

Those are the reasons why, the next time you order refrigeration tube from your distributor, it will be to your advantage to specify Dryseal. He has it and will deliver promptly.

REVERE

COPPER AND BRASS INCORPORATED

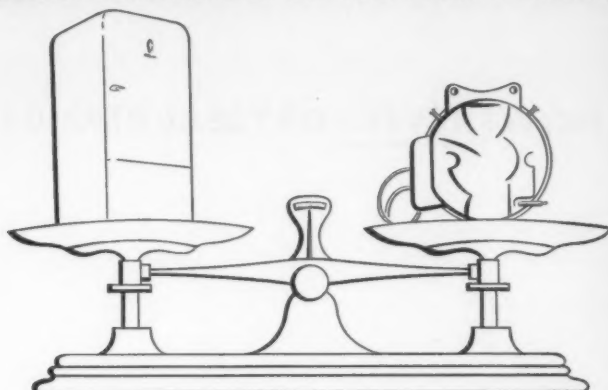
Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.
Sales Offices in Principal Cities,
Distributors Everywhere

Balance

IN A DOMESTIC REFRIGERATOR IS ESSENTIAL
TO SUCCESSFUL OPERATION IN THE USER'S HOME



*Balance
Balance*

... of the hermetic unit capacity to the refrigerating system and cabinet are of prime importance.

... of the reciprocating and motive mechanism is necessary to quiet operation and freedom from vibration.

... but these two major elements of performance require a great deal of careful engineering in proper application of the compressor assembly to the evaporator and cabinet. Maximum refrigeration with minimum power and cost is the prime objective. Thus, one designer may achieve the same operating efficiency with a small unit that requires a larger unit in another similar product. Again careful balance is the answer.

1. Balance of the cabinet heat leak to the unit capacity by attention to: Proper insulation • Vapor barriers • Cabinet sealing • Tight construction and Good door seals.
2. Balance of the evaporator to the unit capacity by proper design for temperature and cooling. Size • Shape • Surface • Position • Baffling and Mounting.
3. Balance in the evaporator refrigerant passages to obtain • Correct refrigerant flow • Minimum refrigerant charge.

4. Balance in air flow over the motor compressor to • Maintain low shell temperature • Minimum motor winding temperature • Low oil temperature.
5. Balance of condenser to the compressor to obtain • Low operating head pressures • Adequate air flow • Minimum space.
6. Balance of the capillary tube to unit capacity to obtain • Proper restriction • Correct refrigerant flow.

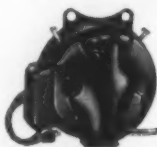
The success in balancing the entire system, in a large degree, measures the customer satisfaction and appeal of the final product.

Tecumseh Products Company are in the best position of any manufacturer in the industry to give you the correct hermetic compressor for your application.

All of these combinations of bore, stroke and refrigerant give an unequalled versatility of displacement and capacity. There is a Tecumseh Hermetic to fit your application.

And—equally important—our engineering laboratories have the 'know how' to help you in proper balance of the unit to your evaporator and cabinet.

Write or wire today for complete information about these Tecumseh Hermetics.



The 1/9 H.P. Tecumseh compact compressor—for limited space application, but maximum performance and efficiency.



The internally spring mounted single cylinder compressor, supplied in all sizes from 1/8 to 1/3 H.P. in four bores and three strokes for either F-12 or F-22 refrigerant.



The Tecumseh twin, supplied in all sizes from 1/4 to 3/4 H.P. in four bores and three strokes for either F-12 or F-22 refrigerant.



TECUMSEH PRODUCTS COMPANY
TECUMSEH, MICHIGAN

EXPORT DEPARTMENT: 2111 WOODWARD AVE., DETROIT 1, MICH.

★ World's largest independent producer of compressors and condensing units for the refrigeration industry. ★

SELL THE LEADER...SELL WESTINGHOUSE!



New!
COMPARTMENT-TYPE COOLERS
3-TEMP.*..WITH Magi-Trol*
 (CONTROL)

*Trade Mark



POURS... Accommodates a five-gallon bottle. Cools adequate water for 30 office workers. Has all the other features of the regular Westinghouse Bottle Cooler... PLUS storage and freezing.



STORES... Keeps 29 beverage or 40 half-pint milk bottles ice cold! You'll find prospects everywhere: private homes, hospitals, small biological laboratories and scores of other places.

...of course, it's Electric!

There's a big market for this versatile 3-Way Westinghouse Cooler... available in either a bottle cooler (as illustrated) or a pressure cooler. Compactly designed, both models *pour, store* and *freeze* in less space than normally occupied by conventional coolers!

The exclusive 3-Temp with Magi-Trol insures three different temperatures: water at 50°F, a spacious ice cube and freezer compartment at below freezing temperature, and a roomy refrigerated storage space at 35-38°F. The Magi-Trol automatically maintains the desired temperature for each function. You'll find these new Westinghouse Coolers will be tops for quick sales, easy sales, many sales.



FREEZES... Keeps 3½ lbs. or 28 ice cubes ready for instant use! Freezer unit, with shelf and trays removed, is large enough to store 3 pints of ice cream.

WESTINGHOUSE ELECTRIC CORPORATION
 Appliance Division • Springfield 2, Mass.

YOU CAN BE SURE..IF IT'S
Westinghouse

For further information call your Westinghouse Distributor or mail this coupon to Westinghouse Electric Corporation, Springfield 2, Mass.

Name _____
 Street _____
 City _____
 State _____

8CRAC

What the serviceman should know about VIRGINIA REFRIGERATION products

To Charge a System,
Use Refrigerants
That Are
Consistently Pure,
Consistently Sure...



"EXTRA DRY ESOTOO" (B. P. +14°F.)

"Extra Dry" is the refrigeration grade SO_2 that service and maintenance engineers have endorsed for more than 20 years. Comes in all popular cylinder sizes.

"V-METH-L" (B. P. -10.7°F.)

Virginia Methyl Chloride is made specifically for refrigeration use. Low moisture content, low acidity and narrow boiling range recommend "V-Meth-L" for the most exacting requirements.

"FREON" REFRIGERANTS

"FREON-11"
"Boiling Point"
74.7°F.

"FREON-12"
"Boiling Point"
-21.6°F.

"FREON-22"
"Boiling Point"
-41.4°F.

"FREON-113"
"Boiling Point"
117.6°F.

"FREON-114"
"Boiling Point"
38.0°F.

Virginia Smelting Company is distributor
for Kinetic's "Freon" Refrigerants.

VIRGINIA'S NEWEST PRODUCT... CAN-O-GAS



Handy, throw-away, no-deposit can. The perfect way to charge hermetic systems, water coolers, beverage coolers, vendors. Available filled with "Freon-12" (15 oz.) or "Freon-114" (16 oz.). Each can is precision-filled to make certain the refrigerant is clean and dry. Can-O-Gas features a simple, practical clip-on opener which fits small valves designed for this use. Slip it on the can; turn to puncture seal. It's leakproof, foolproof.

ASK YOUR WHOLESALER OR WRITE VIRGINIA SMELTING COMPANY

WEST NORFOLK

PHILADELPHIA • NEW YORK • BOSTON
CHICAGO • DETROIT • ATLANTA

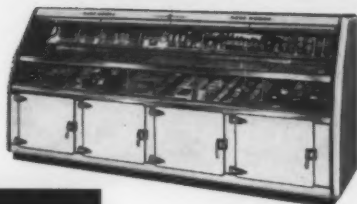
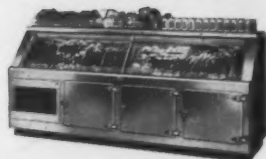


VIRGINIA

Refrigerants

SELL THE LINE THAT STAYS SOLD

Sell the line that is years ahead in profit-wise style and construction, the line that includes so many practical features that it will not only sell easier—but will stay sold, because Super-Cold cases make a profit for your customer right from the start. Don't sell 'em less than a Super-Cold. Write for full details now.



SUPER

COLD

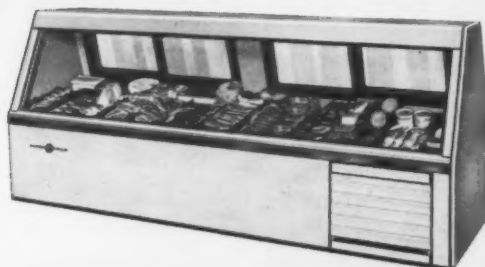
HERE ARE THE THINGS THAT MAKE SALES

Progress—Again and again Super-Cold is out in front with sales designed, dependably engineered commercial refrigeration.

Experience—Super-Cold has manufactured commercial refrigeration exclusively for over 25 years and has pioneered many major improvements in the industry.

Sales Aids—The Super-Cold Corp. offers complete merchandising and sales training techniques gained in 25 years of successful retailing experience, and backs you with advertising in national trade magazines to your customers.

Liberal Franchise—Super-Cold allows you high profit, with advertising sales material support and cooperative assistance to make your job easier. Clip the coupon to your letterhead and mail it today. Complete information will be sent to you immediately.



THE SUPER-COLD CORP.
1020 EAST FIFTY-NINTH STREET • LOS ANGELES 54, CALIFORNIA

NOTE: Inquiries from out of U. S. A. should be addressed to: International Division, or use Cable Address, "Supercold."

GUARDIAN OF
Flavor
Appearance
Purity

SUPER-COLD

Refrigeration

COMPLETE FOOD STORE REFRIGERATION UNDER ONE GREAT NAME

The Super-Cold Corporation
1020 E. 59th St., Los Angeles 54, Calif.

Gentlemen:

Please furnish me with details on your new Super-Cold franchise.

Name _____

Address _____

City _____ State _____



Chase Copper Refrigerator Service Tube Package is 4 WAYS BETTER!



Easier to Use!

Coiled tube slips out easily. Cut—and the unused tube slips back in. Really convenient.



Easier to Identify!

Sizes and specifications printed on the carton in big type, read at a glance.



Easier to Store!

Strong, flat, corrugated packages save storage space. Keep them in or out of carton.



Inside every package is Chase Copper Tube—the best refrigerator service tube you can buy. It's so extra soft it's easy to work—so uniform in temper it's easy to bend. Automatically controlled annealing makes it clean and oxide-free. The Chase new end seal fits wherever the tube does, need not be removed until making connection, *keeps tube clean inside*. Sizes $\frac{1}{8}$ " to $\frac{3}{4}$ " diameters in standard 50' lengths.

Chase Wrought Copper Fittings expand and contract with tube—give permanently tight joints. And they fit exactly, with no inside ridges to stop free-flow of refrigerant.



Easier to Ship!

Thin boxes are closely packed in light strong carton for most economical shipping.

Chase



the Nation's Headquarters for
BRASS & COPPER

WATERBURY 20 CONNECTICUT

SUBSIDIARY OF KENNECOTT COPPER CORPORATION

THIS IS THE CHASE NETWORK — handiest way to buy brass

ALBANY! ATLANTA BALTIMORE BOSTON CHICAGO CINCINNATI CLEVELAND DALLAS DENVER DETROIT HOUSTON INDIANAPOLIS KANSAS CITY, MO. LOS ANGELES MILWAUKEE MINNEAPOLIS NEWARK NEW ORLEANS NEW YORK PHILADELPHIA PITTSBURGH PROVIDENCE ROCHESTER ST. LOUIS SAN FRANCISCO SEATTLE WATERBURY (Stores Office Only)

LOOK TO

UNIVERSAL COOLER

FOR

Replacement Compressors & Parts

THAT

help you win and hold customers!

RANGE OF SIZES

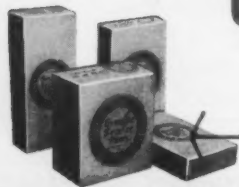
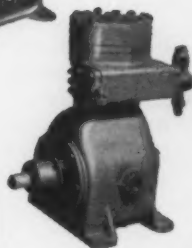
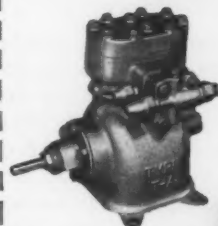
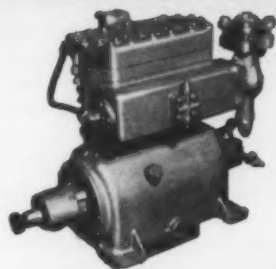
Universal Cooler offers the most complete line of refrigeration compressors in the industry. There is a size (up to 15 H.P.) to solve ANY refrigeration problem.

QUALITY

Universal Cooler products are made of the finest materials by experienced workmen equipped with modern machine tools. Close-tolerance workmanship and rigid inspection procedures assure long, efficient life for compressors and parts.

SERVICE

Standard units and compressors are carried in stock for quick shipment. Replacement parts are available in more than 200 cities. This availability of parts strengthens customer acceptance of Universal Cooler units and simplifies servicing problems.



UNIVERSAL



COOLER

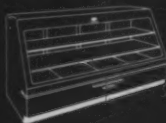
MARION, OHIO

LOOK FOR THESE BOXES

They are your assurance of GENUINE Universal Cooler replacement parts. You'll be interested, too, in UNIVERSAL COOLER Compressor Conversion Kits.

SELL T-P*

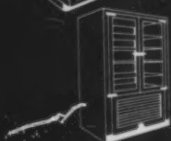
for automatic defrosting of



meat display cases



self-serve cases



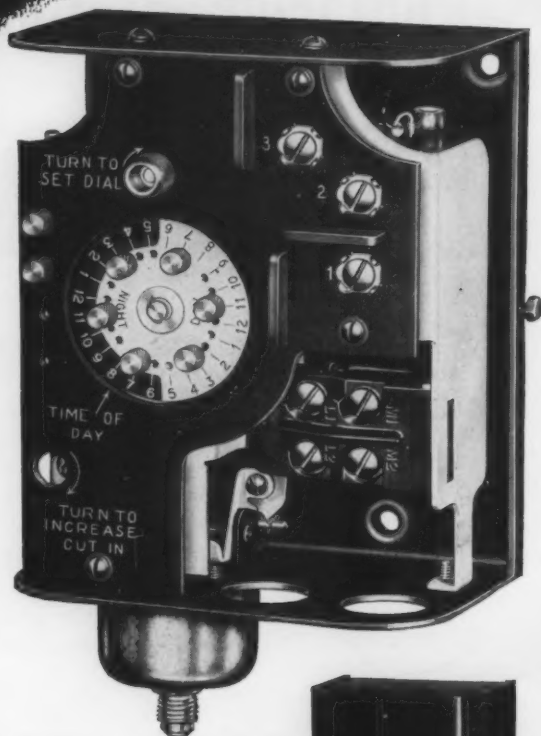
reach-in
boxes

T-P* . . . *Time-Pressure defrosting . . . is the big news in the refrigeration field. It is the best method for defrosting coils in the 24° F. to 35° F. refrigeration range and higher. Here's why . . .

It *automatically and correctly varies* the defrost period as required . . . no more annoying problems to determine length of shut-down time which fluctuates considerably with load and weather conditions. Yes . . . T-P* *avoids unnecessary* shut-down time by stopping compressor *only* long enough to defrost . . . **NO LONGER . . .** and does it *automatically!*

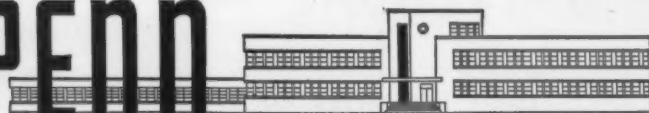
The operation of the PENN Series 325 Time-Pressure Defroster is simple. At predetermined intervals a synchronous timer stops the compressor. Then, when defrosting is completed, rising back pressure in the system automatically starts the refrigeration cycle.

Simple, compact and convenient to mount and wire, the Series 325 is easy to sell. Learn how you, too, can cash in on extra sales and profits . . . ask your wholesaler or write **Penn Electric Switch Co., Goshen, Ind.** Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.



Interior (above) and exterior (right) of Type 325. Timer can be set for one to eight "off periods" every 24 hours. Length of "off period" varies automatically with the frost condition of the coil.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

RTU

News • Laws • Trends

1951 Show Will Be Limited To Four Days

FOLLOWING thorough consideration by the REMA All-Industry Show Committee, and after consultation with officers of REWA, RACCA and RSES, it has been decided to make the 7th All-Industry Show a four-day show, without any special days or previews.

Official dates of the Exposition will be November 5, 6, 7 and 8, 1951. Site of the Show will be Chicago's Navy Pier, and Show committee members already have made several trips to inspect the location. Although final plans have not yet been developed (space sales won't start until November) it is thought that booths will be available in 10, 12, 16 and 20 feet depths.

Hydraulic Truck Refrigeration System Developed

A NEW hydraulically operated truck refrigeration system which is driven by the truck's own power take-off has been announced by Batavia Body Co. Use of the power take-off and hydraulic operation, according to officials, enables a saving of about 1,000 pounds over the average body system, the saving being due to reduced weight of component parts.

The new truck is described as a wholly mobile unit which generates constant controlled temperatures every minute the truck is on the road. The system is said to eliminate auxiliary power plants and holdover plates for providing en route refrigeration. Night transportation and daytime deliveries are possible, it is said, because overnight charging of holdover plates is eliminated. For periodic defrosting and cleaning, four-hour pull-downs are possible.

In terms of maintenance the condensing unit and hydraulic system are mechanically independent. Condensing unit is located at the lower left front corner of the body. An auxiliary electric motor is mounted beside the small fluid motor in case of emergency.

New Instrument Measures Heat Conductivity

DEVELOPMENT of a portable instrument for determining the thermal conductivity of wet or dry solids within 10 minutes was reported to members of ASHVE at their semi-annual meeting in Muskoka, Ont., recently. The instrument, an electrically heated probe, was developed by F. C. Hooper and F. R. Lepper at the University of

Toronto primarily to measure the thermal conductivity of moist soils, but it has been applied successfully to other materials such as building materials and insulation, whose heat conducting properties are of vital concern to refrigeration and air conditioning engineers.

The instrument consists of an aluminum tube, inside of which there is an axial constantan electrical resistance wire, insulated over its length and grounded to the tube at the lower end. An electrical current can be passed through this wire to provide a heat source of constant strength. A smaller instrument is being developed for use in determining thermal conductivity of meats, vegetables and other foodstuffs, particularly those normally stored by cooling or freezing.

Feeding a Circus Is No Stunt With Frozen Food

FEEDING the 1,400 persons who make up the circus troupe of Ringling Bros.-Barnum & Bailey, Inc. is no stunt for George J. Blood, steward and superintendent of the dining department—thanks to frozen foods. Frozen foods, which today constitute about 45 per cent (on a weight basis) of all foods served to the circus staff, enable Blood to work out menus in advance, without worrying about what foods may be available in the towns the circus visits.

Blood began using frozen foods about nine years ago, and now carries about 25 different items, including meats, poultry, fruits and juices, vegetables and seafoods. On the road, the foods are carried in a 16-foot refrigerated trailer which fits on a railroad flat car. Capacity of the trailer is 18 tons, and it is equipped with hold-over plates to assure low temperature. Two or three weeks' advance supply of food is usually carried.

Cold Storage Space Increases 10 Million Feet

MODERN refrigerated storage space increased 10 million cubic feet within the last five years, with freezer space accounting for most of the expansion, according to the National Association of Refrigerated Warehouses.

Emphasizing that existing facilities are not overloaded, the NARW quoted a U. S. Department of Agriculture survey published March 1, 1950, which showed average occupancy of the nation's refrigerated warehouses to be 74% of capacity. The high cost of doing business, it was said, necessitated a minimum of 50 to 75% capacity use of warehouses for companies to break even.

Comfort Cooling In Apartments May Start Trend

THE time may not be too far off when air conditioning will play as important a role in the average American household as the electric refrigerator, electric range, and other appliances do today. Inexpensive, packaged air conditioners may be what will make this possible.

One big step in this direction—perhaps the forerunner of a new trend for air conditioning—can be found in the new ultra-modern Childs Garden Apartments now being developed in Floral Park, Long Island. Although rents are as low as \$58.50 a month, every apartment in the 284-family project will be air conditioned at no extra cost to tenants. One-half horsepower window-type room air conditioners will do the job.

GIVE YOUR CUSTOMER MORE THAN HE PAYS FOR

Profit language may be the only kind of talk a tavern owner understands, but you can offset his price-consciousness by offering him some installation "extras" which make him think that he's getting more than he bargained for

WHEN you're talking beer cooling to a tavern owner there's just one language he understands—that's profit language, expressed in terms of cents per glass and dollars per barrel. If you can't talk that kind of language you might as well not try to sell beer cooling equipment.

Milwaukee is noted as a beer producing and beer drinking town. Our most recent check of the classified section of the phone book revealed listings for no less than 2500 taverns in the metropolitan area.

You might suspect from this that the market for beer cooling equipment in a community that is so beer conscious is pretty well saturated, but actually this is not the case at all. In fact, I venture to say that not over 40% of these taverns have the necessary equipment to serve beer properly. Some 20% of them still use ice.

The first question I always ask a tavern prospect is whether or not he uses ice to cool his beer. If he does, you can bet that most of the time he is either serving flat beer or beer that consists largely of foam. In either case he is failing to satisfy not only the customers he serves but also the brewery from which he obtains his beer. This means that the owner himself isn't happy with the situation, and that puts him in a good frame of mind to listen to a convincing story

on the merits of mechanical beer cooling.

We start right into our profit story by pointing out to the prospect that a direct draw system is the only system that permits beer to be served the way the brewery intended it to be served, and that whether he serves one glass or 500 such a system can maintain constant temperature conditions and save him money.

We remind him that with the old block tin coils at least three glasses of beer usually are wasted each morning from each tap in order to clear the lines. If a tavern has three taps and sells beer at 10 cents a glass,



By Al Reinhart

Owner
Real Refrigeration Service
Milwaukee, Wis.

that's 90 cents a day down the drain before the first customer is served.

Combing off a glass of beer that is drawn with too much of a collar also means lost profit, as any tavern owner knows. So we tell our prospect—and it's absolutely true—that many of our customers actually throw away their beer combs after installing adequate mechanical refrigeration equipment.

Getting down to facts and figures we show the prospect that at 5 cents a glass a direct draw system will save him \$1 to \$1.50 on each half barrel of beer he serves. On top of this, we point out that operating costs of the mechanical system, including electricity and water, will average only about \$7 per month, as against monthly ice costs of approximately \$30. This \$23, plus the money saved on each half barrel, adds up to a monthly saving that will interest any tavern operator.

As most tavern operators know, beer should be served at 44 to 45 F. Some of them don't realize, however, that beer reaches fermentation at 49 to 50 F, and never should be allowed to go over that temperature from the time it is brewed until the time it is consumed. This makes a pre-cooler, which will hold the beer in kegs at about 42 F, an important part of any tavern installation.

Just a word of caution here, how-

ever. In this town, at least, the breweries provide their tavern customers with prompt and frequent deliveries, so we never try to sell a customer a larger pre-cooler than he really needs. It would only gain us ill will when the tavern keeper discovered that he was paying for a lot of refrigeration which he never really used.

"Extras" Are Important

Because of the price consciousness of the average tavern owner, we emphasize the addition of a few important little "extras" in each installation which tend to make the customer feel that he is getting a little "bonus" for the money he is spending. For instance, we make a practice of building shelves above the barrels in the pre-cooler to provide space for the chilling of about 12 cases of bottled beer. Also, we build a steel plate into the threshold of the pre-cooler door to protect the sill against wear and damage from rolling barrels. These extra touches don't cost much, and they more than pay for themselves in customer good will.

What would comprise an "average" tavern installation? Well, if there is such a thing as an average job it probably would be one built up around a 6 x 8-foot walk-in cooler for pre-cooling 10 half barrels of beer simultaneously, plus providing some additional refrigerated storage space. This pre-cooler probably would be refrigerated by a blower coil, with a rating of 2600 to 2800 Btu at 10 degrees t.d., as the low ceilings found in most tavern basements preclude the use of any other type of coil.

Backbar or Bottle Box?

This pre-cooler should, of course, be located as nearly as possible directly under the tap box, so that the run of the beer lines will be as short as possible. The average tap box or direct draw box will contain two or three beer taps, along with one for seltzer and one for water.

This "average" tavern also would contain either a 6-foot refrigerated backbar or a 6-foot bottle box for the storage of bottled beverages. Although the bottle box will hold approximately 25 cases of beer as opposed to 12 cases for a backbar of the same length, the preference in most of the newer installations seems to be for the refrigerated backbar. The

Continued on page 68

Sales Clincher

BY TOM QUINN

TOM QUINN CO., ERIE, PA.



MRS. SCHULTZ was the perfect prototype of a solid, conservative, proper German matron. A widow for some years, she had continued to operate her husband's tavern after his death. She'd done pretty well at it, too, and now she had decided to purchase a bottled beverage cooler for her back-bar.

I had sold her some other equipment in the past, so I was asked for my recommendations on this job. It so happened that the only bottle cooler in the line which I was then handling was of the upright or vertical variety. But that was somewhat of an innovation, and the good widow's innate conservatism automatically balked at anything new and different. As a result, she leaned more toward the conventional chest-type case that my competition was trying to sell her.

As I walked into the tavern, I was thinking of all the routine sales arguments which I had used to no avail. I was thinking also of this last, risky appeal which I was determined to try. I knew for sure that I would either clinch the sale on this call or lose one good customer for keeps, but I decided that the sale was worth the gamble.

"Mrs. Schultz," I started out, wasting no time in getting to the point, "I've tried hard to sell you on the advantages of my particular product, but I know that I haven't yet convinced you that this upright case is the right one for you. I'm not going to bother you about it any more. This is my last call. But before I say goodbye I

just want to make one final suggestion."

"Ja," she interrupted interestedly, "vaas it iss?"

"Simply this," I explained. "When I leave, I want you to walk over to that full view mirror hanging there on the far wall. Turn around with your back to it. Then bend down and touch the floor as you would if you were reaching for a bottle on the bottom of that chest-type cooler. While you're still in that position, just glance back into the mirror—and then you'll see what every one of your customers at the bar will see every time you bend over to reach into that back-bar case you're thinking of buying."

Before she had time to really digest what I had said, I was on my way to the door. "Goodbye, Mrs. Schultz!" I called as I left. "If you want to get in touch with me, you know my phone number."

After making one other brief call, I returned to the office. My secretary hailed me as soon as I walked in the door. "Where in the world have you been?" she asked. "Mrs. Schultz has called you three times already and wants you to come out to see her right away."

The sale was consummated in just the time that it took me to write up the order. Not one question was asked, and not a single reference was made to my previous call.

But that upright cooler did look mighty nice in that back-bar set-up, and Mrs. Schultz, her dignity preserved, remained one of my steadiest customers as long as she operated the tavern.

Banks find Air Conditioning

A GOOD

CUSTOMER COMFORT is catered to on the banking floor of the Bronxville Trust Co. Air conditioning is provided by two 5-hp Frigidaire packaged units, one of which is shown at the extreme right.



EMPLOYEES SHARE in the benefits of air conditioning, too. This photo shows one of the two 3-hp units which serve the bank's personal credit department. This department was handled as a separate installation.



CONSIDERED from any angle, modern package air conditioning is proving to be a valuable asset to banking establishments and other institutions, either large or small, where the problem of air conditioning has heretofore been viewed as a proposition "too expensive" for serious consideration. Buying fresh, cool air by the package is most certainly a practical answer.

This is especially true for firms housed in older type buildings, erected in the days when air conditioning was considered a "luxury"; before it was realized that air conditioning was a profitable investment for business.

Packaged air conditioners are proving their worth in serving multi-story buildings as well as structures with only a single floor. A good example

PROBLEM PRESENTED by the L-shape of the bookkeeping department was solved by removing the air distribution hood of the 3-hp conditioner and hooking the unit up with two ducts to evenly distribute the air.



Investments NVESTMENT

Packaged air conditioning equipment renders this bank an invaluable service by making its customers comfortable, by keeping its employees working at peak efficiency the year around, and by building a steadily growing reserve of prestige and good will

of a practical, skillfully-engineered installation can be found in a two-story building occupied by the Bronxville Trust Co., Bronxville, N. Y., where an entire ground floor and part of a second floor is air conditioned by package equipment. Eight of these self-contained air conditioners, including two $\frac{1}{2}$ hp, one $\frac{3}{4}$, three 3 hp and two 5 hp units, keep the bank cool and comfortable for employees and patrons alike, throughout the hot summer months. In addition, an electric dehumidifier safeguards valuables in the vault.

This bank is located in one of New York's most prosperous suburban towns. Although the population of Bronxville is only about 9,000, the bank's business extends into a field about three times as large, specializing in personal and commercial loans.

The two-story building which the company occupies is about 100 feet long with an average depth of about 49 feet. However, the rear of the building is irregular in shape with three protruding sections. The structure originally housed a number of retail stores on the ground floor and offices and apartments on the second. The banking concern now occupies the entire building with the exception of a small law office on the second floor. Seventy persons are regularly employed.

Before the work was actually initiated by the County Refrigeration Co., Frigidaire dealer in Mt. Vernon, N. Y., which made the installation, many factors had to be considered. In the first place, the building was so constructed that the main banking floor, with its teller cages, and the

personal credit department had to be treated as separate installations from an air conditioning viewpoint. Each have separate entrances. The first floor also houses executive offices and the trust department, while the second floor includes the bookkeeping department, checking section, switchboard and other offices.

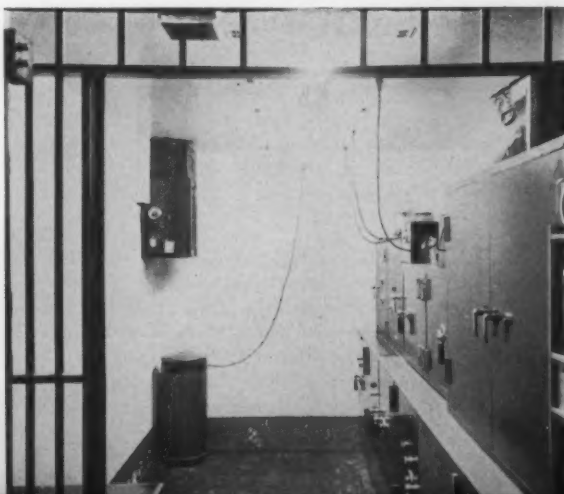
Generally speaking, County Refrigeration Co. kept three main objectives in mind during the initial survey. First, all data was gathered to establish the air conditioning load. Next, the best but least expensive methods for installation were considered. Finally, the best equipment to do the specific air conditioning job was selected.

When air conditioning is installed in a multi-story building such as the Bronxville Trust Co. occupies, or any

HEAVY HEAT LOAD in the credit checking department which results from its top floor location and a window exposed to the afternoon sun is handled satisfactorily by this $\frac{1}{2}$ -hp window-type air conditioner.



CASH IS CONDITIONED too by this Frigidaire electric dehumidifier located in the bank's money and security vault where it protects millions of dollars worth of valuables against the ravages of high humidity.





Cooling Pays Dividends In Drive-In Banks, Too!

WITH America more in a hurry than ever before, many banks throughout the United States are adopting drive-in teller booths to streamline service to their depositors. With a little ingenuity, banks can overcome the heating and cooling problems associated with these booths, especially if they are located along the curbing.

The problem of the Amarillo (Tex.) National Bank was the year-round air conditioning of its drive-in teller booth, erected on the curb edge of the sidewalk several feet from the bank building. Only 8 by 6 feet on the outside and 6 feet by 4 feet on the inside, the booth would have been as hot as a dry kiln in summer and as cold as a frozen fish in winter without adequate year-round air conditioning.

To conserve space, it was decided to install the air conditioning equipment in the bank basement about 30 feet from the booth. A hot water coil provides radiant heating, while a steam coil and a humidifying section in the air unit conditions the incoming air. Outside air for ventilation is brought all the way from the alley end of the bank building, in order not to compromise the safety features of the bank.

Refrigeration is supplied by a York 5 HW condensing unit operating on the air conditioner. The cooling load was estimated at 7400 Btu/hr. and the heating load at 8800 Btu/hr.

Exterior of the booth is of terra cotta, and it is provided with a bullet-proof window, and a sound system for communication with the customers. An emergency steel exit door was erected in the rear of the structure. The air conditioning system, which produces approximately 750 cfm of air, properly tempered and humidified, makes this booth possibly the most comfortable spot in Amarillo, winter and summer.

Since most banks are so located that drive-in teller booths cannot be provided as part of the bank structure, the sidewalk booth may prove to have a wide application throughout the United States. This particular installation was made by Bank and Plains Plumbing Co., Inc., Amarillo York distributor.

other building for that matter, there are certain fundamentals that enter into the picture. Here are several: (1) Good air distribution; (2) proper zoning; (3) accurate control; (4) sufficient ventilation; (5) efficient air cleaning; (6) large cooling capacity, and (7) adequate utilities.

Installation Is Divided

Because of the nature of the building structure, air conditioning was considered as six separate installations, consisting of (1) the main banking floor; (2) personal credit department; (3) the bookkeeping department; (4) credit checking section; (5) office of the president and (6) secretarial office. Each of these installations provide complete air conditioning facilities, including the circulation of fresh, dehumidified, filtered, cool air.

Two package air conditioners, supplying 10 tons of refrigeration, are employed for the main banking floor of the building. This area has three outside walls and is approximately 48 feet long and 44 feet wide with a ceiling 10-1/2 feet high. At one end is an extension about 13 by 18 feet. Teller's cages, surrounded by a partitioned enclosure 7 1/2 feet high, form an island in the approximate center of the main banking floor. A 5 hp packaged air conditioner has been installed adjacent to the main entrance and the conditioned air is discharged from the air distribution hood of the unit. A similar 5 hp air conditioner was installed at the rear of the area.

Ductwork Is Utilized

A hallway extends across the width of the building, separating the main banking floor from the personal credit department. The latter, which is shaped roughly like a "T", has a maximum width of 54 feet and a maximum length of 48 feet. Like the main banking floor, this section has a ceiling 10-1/2 feet high. Air conditioning is supplied by two units with a total refrigeration capacity of 6 tons. A 3 hp package unit is located in the trust department enclosure, next to the wall of the dividing hallway. Another similarly-sized air conditioner is installed behind the teller's section of the personal credit department. These two conditioners serve the entire T-shaped area.

In the part of the building occupied by the personal credit department is

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ALIGNMENT CHART HELPS SOLVE SWEATING PROBLEM

(See chart on following page)

INSULATION prevents cold-surface sweating on piping, ducts, tanks and other vessels containing cold air or low-temperature fluids—provided the thickness of the insulation is sufficient. The Industrial Mineral Wool Institute has developed a new alignment chart (reproduced on the following page) which eliminates guesswork and the use of formulas, and on which the minimum insulation thickness required to prevent surface condensation is easily determined.

The temperature (T_2) of the cold liquid or gaseous material in the pipe or vessel, the relative humidity (RH) and the temperature (T) of the surrounding air (as shown in the diagram on the chart) are the conditions at each particular cold surface which determine the minimum insulation thickness which prevents sweating. Because it more than covers the practical ranges of temperature and humidity, the chart (based on $K=0.29$, an average thermal conductivity for mineral wool insulation) is applicable to any cold surface.

Two examples illustrating how the alignment chart may be used are presented below.

Example 1

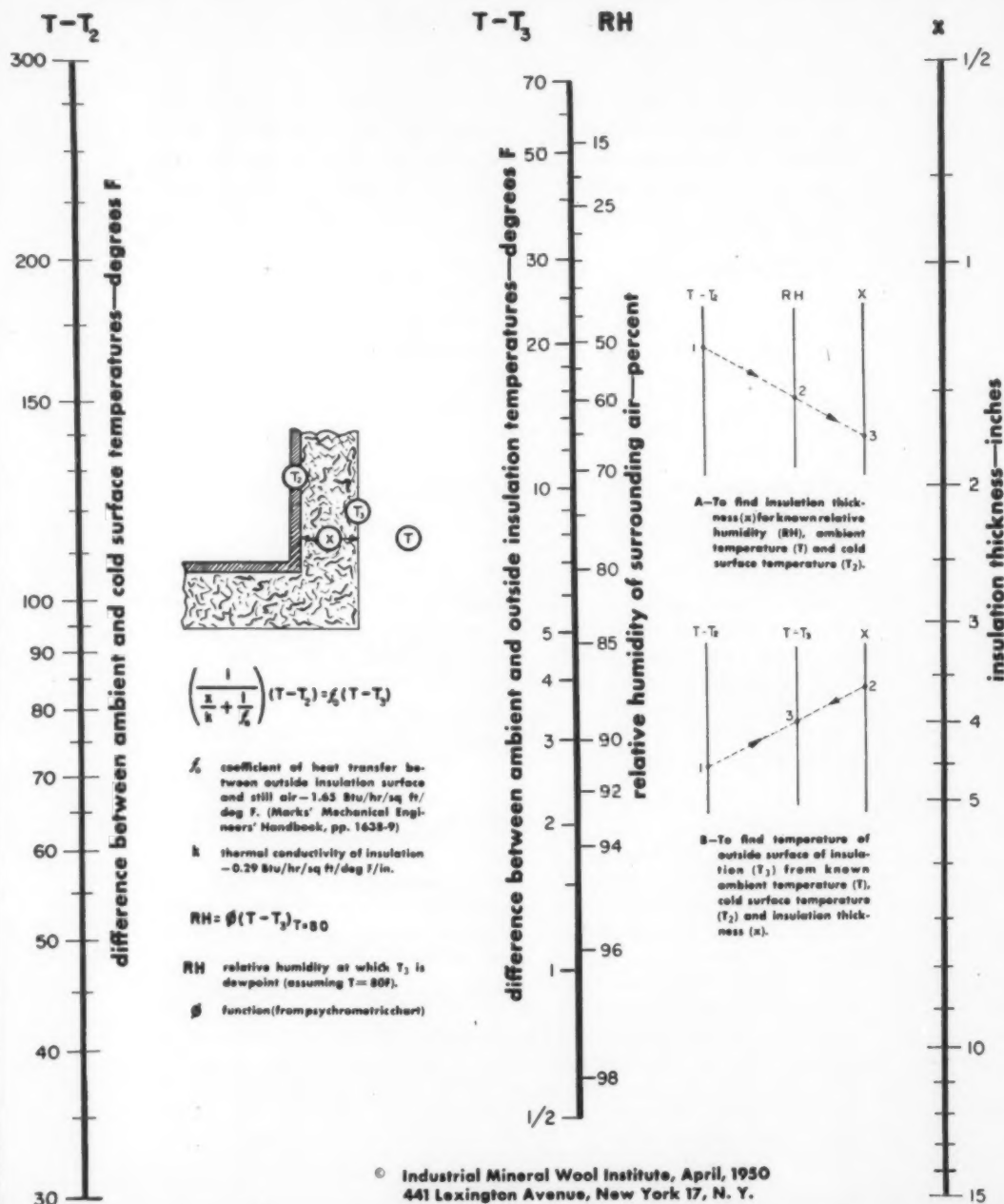
A sheet metal duct in an air conditioning system carries cool air at 48F through a basement where the ambient temperature often reaches 93F and the humidity rises as high as 85%. Then $T-T_2$ ($93-48$) is 45 and RH equals 85%. A straight line drawn through 45 on the left-hand scale ($T-T_2$) and 85 on the center scale (RH) is found to intersect the right-hand or x-scale at $1\frac{1}{2}$ inches—the minimum insulation thickness required to prevent sweating on the cool air duct.

Example 2

A tank containing brine at 27F (T_2) is to be covered with 6-inch thick (x) blanket insulation (as recommended by Commercial Standard CS105-48, "Mineral Wool Insulation For Low Temperatures"). The maximum temperature of the surrounding air is known to be 82F, but the plant manager must know the highest relative humidity that can be tolerated without sweating on the surface of the brine tank. Using the alignment chart, a straight line is drawn through 55 ($82-27$) on the left-hand ($T-T_2$) scale and 6 (x in inches) on the right-hand scale. The line crosses the center (RH) scale at about 94½%, the highest relative humidity that will not result in sweating. The center scale also indicates that, in this case, the temperature difference ($T-T_2$) between the surrounding air and the outside surface of the insulation is about $1\frac{1}{2}$ F.

ALIGNMENT CHART HELPS SOLVE SWEATING PROBLEM

(See explanation on preceeding page)



CONTRACTORS

News • Activities • Plans

RACCA Directors Act To End "By-Pass" in Cabinet Selling

DIRECTORS of Refrigeration and Air Conditioning Contractors Association, at their quarterly meeting in Chicago recently, gave serious consideration to the practice of ice cream manufacturers and frozen food processors furnishing refrigeration facilities to retail food outlets, thereby by-passing the refrigeration contractor.

In the opinion of RACCA directors, this undesirable practice is increasing, and less consideration is being given to the refrigeration contractor as far as sale of this equipment is concerned.

Seek Governmental Aid

RACCA's executive vice president, Roger J. O'Donnell, was instructed to marshal all available governmental assistance in eliminating this practice, which in other industries has been accomplished through the services of the Federal Trade Commission. O'Donnell also is presenting this matter to the Anti-Trust Division of the Department of Justice, to determine whether regulations of that department are being violated either by refrigeration equipment manufacturers, ice cream manufacturers, or frozen food processors.

RACCA directors feel that the practice and policy of some of the leading manufacturers of equipment, in refusing to sell directly to ice cream manufacturers and frozen food processors, substantiates the position the association is taking.

Report on the Situation

O'Donnell's report to RACCA members on the situation, contained in the association's June *News Letter*, follows:

"One of the most serious problems facing many refrigeration and air conditioning contractors at the present time is the practice of ice cream man-

ufacturers, frozen food processors and other similar groups furnishing refrigeration equipment to retail outlets and thereby by-passing the contractor. There has been much talk about this, but there seems to have been little action taken toward the elimination of such a condition.

"The evils of this practice are

FIFTH annual convention of Refrigeration and Air Conditioning Contractors Association, to be held in Long Beach, Calif., concurrently with the 1950 West Coast Educational Exhibit and Conference, will be a two-day affair, Nov. 15 and 16, with educational panel talks on the morning of the first day, followed by a luncheon to which all industry members will be invited.

Annual membership meeting and election of directors will take place that afternoon. Second day of the meeting will be set aside for membership and board meetings.

Speakers at the opening session and the luncheon will be announced shortly. Headquarters will be at the Hotel Lafayette, Long Beach, with Neal S. Templin, Los Angeles, acting as program chairman in charge of all arrangements.

numerous from an economical as well as an ethical point of view.

Economically, it is unsound to disrupt the regular and accepted distribution system of the industry by direct selling to the ice cream and frozen food outlets. The equipment manufacturer who furnishes his products directly to an ice cream manufacturer or to a frozen food processor who, in turn, can not properly service the equipment after it is installed in a retail outlet is building up consumer ill-will for himself as well as for the dealer who carries that line. Sooner or later the dissatisfaction due to lack of service results in decreased sales for dealer and manufacturer alike.

"We recognize the necessity for each equipment manufacturer to sell as many units as possible, but eliminating the dealer-contractor does not

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TWO MORE LOCAL GROUPS JOIN CONTRACTOR ASSN.

Applications for two new local contractor associations were formally approved by directors of Refrigeration & Air Conditioning Contractors Association at their June quarterly meeting. The new locals are:

The Florida West Coast Air Conditioning and Refrigeration Contractors Association, Tampa, Fla., with W. B. Haggerty, president; Arthur Turner, Sr., vice president; and Charles Cacamio, secretary-treasurer.

The Refrigeration and Air Conditioning Contractors Association of Mississippi, Inc., Jackson, Miss., with W. T. Tyson, Jr., president; L. B. Brummett, vice president; E. C. Aldridge, Jr., secretary-treasurer; and W. C. Piatt, sergeant-at-arms.

Two individual applications for RACCA membership also were formally approved and accepted at the meeting: Johnston Refrigeration Construction, Detroit (George L. Johnston); and Refrigeration Service, Inc., Detroit (A. C. Ellerbusch).

2 NEW DIRECTORS NAMED BY RACCA

Two new directors have been elected by Refrigeration and Air Conditioning Contractors Association to fill the positions formerly held by E. C. Newton of Kelmere Refrigeration, Inc., and A. G. Weber of Weber Refrigeration, who recently resigned.

J. Frank Park, of Western Air and Refrigeration, Inc., Los Angeles, was selected as one of the new directors, to serve until the next annual meeting in November. He replaces Newton.

Replacing Weber is Harvey O. Miller, of Murphy & Miller, Inc., Chicago.

O'DONNELL NAMED RACCA "CONTACT" EXECUTIVE

Roger J. O'Donnell has been named executive vice president of the Refrigeration & Air Conditioning Contractors Association, and will travel extensively throughout the country to contact local contractor groups in a drive to build both local associations and the national group, and to get activities started in meeting problems that face contractors.

O'Donnell has a wide background of association experience, and also

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By Leonard F. Auerbach

OUR final caution in the preceding discussion was to get right out after you close your sale. Remember we said just "get out"—not "get out and stay out." You certainly don't want to stay out!

You should be in to see your new customer before, during and after the installation. Before your men show up, you should explain to him some of the intricacies of the installation. There's no need for your customer to have a fit when some mechanic with an electric hammer starts pounding holes in his floor.

There will undoubtedly be further need to calm him down while your men are working there—and it'll be

easier to soothe him if you're there before he's really upset. The man's right. You should have let him know you were going to turn off the water before some good customer of his was embarrassed in the washroom.

Actually your visits serve to show a continued interest on your part for something you might consider routine, but which is terribly important to him. That sort of thing is appreciated and remembered.

Be sure to be around to add your personal touch to the starting up of the equipment. Explain—in layman's language—the operation of the system. Point out that it is mechanical equipment, and that it takes a while to get used to it, and to get it in perfect operation. Point out to him that another piece of mechanical equipment, a new car, is usually back at the dealer's garage more in the first month than in the next twelve.

Did you ever have any friends who came to see you constantly during the summer because you had such a nice cottage, and then lost interest in you in the fall? Imagine yourself in your customer's shoes. You practically lived on his doorstep until you got

your order, and then you disappeared. He didn't see you again for a year, and then only because you wanted him to tell another prospect what a swell job you did.

That sort of thing doesn't set well. Try tapering off your visits to him. Stop by after a week and see how he's doing with his new equipment. Come in again in a couple of weeks, and again in a month. If you've done a good job for the man, your time will be well spent. He'll be a wonderful source of new business.

Vanity, Thy Name Is . . .

At the risk of annoying you with repetition, I would like again to point out the strength of a man's vanity—his desire to convince the world that he was smart to put in Air Conditioning, and particularly smart to buy it from you.

Two different beauty parlor operators were prime examples of that "I did it, so it must be right" attitude. One of them, after taking two years to decide to buy, had the gall to say, the day after the equipment was installed—"Anybody who doesn't put Air Conditioning in his shop is a darned fool!" The other one fiddled around for three years. A week after his Air Conditioning was started up he asked—"How can these other

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These articles have been written on the basis of the author's own experience, which has included positions as sales engineer in air conditioning for Spohn Heating & Ventilating Co.; sales manager of air conditioning for Allied Refrigeration Sales Corp.; director of sales, air conditioning division, Temperature Equipment Corp. He is currently engaged in air conditioning sales work with Refrigeration Sales Corp.

ABOUT People

In a reorganization of the sales department of Kold-Hold Mfg. Co.,



C. K. DAVIS



J. R. TEPPER



E. A. THIELE

Lansing, Mich., **J. R. Tepfer** has been appointed general sales manager, **E. A. Thiele** has been named vice president in charge of special product development, **C. K. Davis** refrigeration sales manager, **C. P. Yoder** manager of Platecoil sales, and **T. O. Lester** sales assistant to Thiele. President **J. R. Tranter** will have direct charge of the company's radiant base-board project.

Tepfer was general sales manager of Lonergan Mfg. Co. for the past two years, and prior to that was with Gibson Refrigerator Co. and Mayflower Refrigeration Corp. Davis has been with Kold-Hold since 1945, the past four years as assistant sales manager. He will direct Kold-Hold's 11 territorial sales representatives who contact the more than 250 wholesalers through whom the company's plate coils are sold. Lester has been with Kold-Hold and Batavia Body Co. for the past four years and a service engineer for 20 years. Under Yoder, Platecoil sales will be completely disassociated from refrigeration.

Appointment of **James L. Johnson** as sales manager for Cordley & Hayes, manufacturers of ice and

electric water coolers, is announced by **C. M. Cordley**, president. During the past four years Johnson has been successively district manager and regional manager and prior to joining Cordley & Hayes in 1946 was district merchandise manager for Peninsular district of Graybar Electric Co., Jacksonville, Fla.

George A. Chappell, Jr., with Union Electric Co., St. Louis, for 20 years, has joined Automatic Firing Corp. as assistant to the president. He will be in charge of production engineering. Chappell served Union Electric eight years as assistant department head of the rate and statistical department and four years as industrial engineer.

Max A. Myers has been appointed domestic sales manager of Reco Products Division of Refrigeration Engineering Corp., Philadelphia. His initial project will be the establishment of a national distribution system for the company's new Frosti-Stik



freezers for making frozen confections and for Reco-Fab prefabricated sectional walk-ins and reach-ins. Meyers from 1942 until last April was district manager for Uniflow Mfg. Co., Erie, Pa., and prior to that was general manager of the refrigeration division of Trilling & Montague, Philadelphia.

Robert J. (Tommy) Thompson is director of sales and **Emory M. Fanning** assistant director of a new Kinetic Chemicals Division of the Du Pont Company, set up when operations of Kinetic were integrated with those of Du Pont's Organic Chemicals Department on July 1. Long a Du-

Pont affiliate, Kinetic has been wholly owned by that company since Dec. 30. Manufacture of "Freon" compounds, principally refrigerants and aerosol propellants, will be in charge of **Stuart W. Pratt** as production manager.

C. Douglas Porch, president of Kinetic Chemicals, retired July 31. He had been with Du Pont and Kinetic Chemicals for more than 43 years.

Jim C. Chase has been named manager of the recently expanded



DriCooler sales department of The Marley Co., Inc. He has been located at the general offices in Kansas City, Kan. since joining the company late in 1948. Before coming to Marley, he was Southwest district manager for Aerofin Corp. working out of Dallas, and before that he had been a lieutenant in the Navy, doing salvage and repair work.

Election of **Krantz Keller** as treasurer and appointment of **M. C. Aspholm** as comptroller of Carrier Corp. has been announced by **Cloud Wampler**, president.

Ralph L. Beach, who has been associated with York Corp. since his graduation from Kansas State College in 1926, has been promoted to assistant general service manager of the air conditioning and refrigeration firm. Prior to his new assignment,



Beach had been serving as engineer manager and district engineer of York's Southern District at Atlanta. Beach will assist **Roger H. Dowling**, general service manager, in guiding the York service organization.

D. L. (Dave) Edelmuth has been appointed vice president and general

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"PAINLESS" PAY-OFFS PAY

With competition for the commercial refrigeration sales dollar getting tougher, dealers are finding that meter merchandising helps them over the sales humps. Here are reports from a recent nationwide survey on the subject

WITH competition for the commercial refrigeration sales dollar tough and getting tougher, dealers are utilizing every merchandising method at their disposal to obtain their fair share of business in this field—and one of the most important factors in this respect is making it as easy and painless as possible for the merchant to pay for the new equipment that goes into his store.

This fact is brought out in a survey just completed by International Register Co., Chicago manufacturer of coin meters, covering reports on their 1949 experience submitted by 678 commercial refrigeration dealers—a cross section of the industry in-

cluding small and large dealers, and those located in metropolitan areas as well as in rural communities.

Important points brought out by the survey reveal that:

Dealers have reduced down payment requirements considerably in an effort to sell today's market.

Repossessions are increasing as compared with the previous year.

Dealers are appropriating more money this year for advertising and sales promotion.

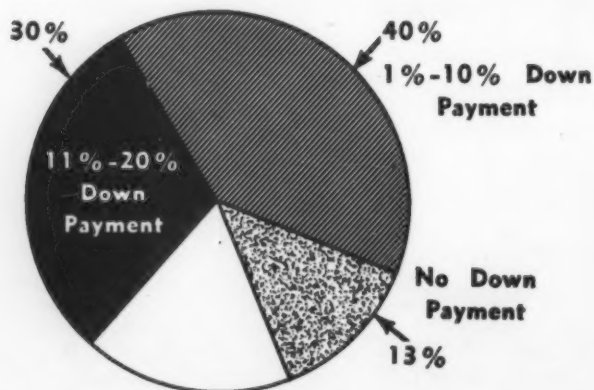
Of the 678 commercial refrigeration dealers reporting in the survey, more firms (46%) used coin meters in their selling programs than did in the previous year (36%), and 83%

were planning to make some use of coin meters in their 1950 sales efforts.

Indicating that the meter plan was a definite stimulus to sales, 92% of the dealers using meters stated that this merchandising method helped to increase their sales volume. Only nine dealers reported that, in their opinion, the plan did not appreciably add to their sales volume, and 13 others indicated that the results they had experienced with the plan were questionable.

As an example of what can be accomplished through aggressive merchandising efforts, reports showed the following meter plan sales in 1949:

Down-Payments Are Lower, But Sales Are Up



DOWN PAYMENTS ranging from none to 1/3 or higher were reported by dealers answering the International Register survey. However, as the chart above indicates, a majority of dealers obtained some cash with orders.



SALES VALUE of the "painless payment" method is shown in this chart, in which 92% of dealers asserted that meter selling had proved a stimulus to their 1949 commercial volume. Only 8 said it hadn't helped them.

69 dealers sold: 10-24 units
 30 dealers sold: 25-49 units
 16 dealers sold: 50-74 units
 6 dealers sold: 75-99 units
 6 dealers sold: 100-149 units
 4 dealers sold: 150-199 units
 15 dealers sold: 200-299 units
 2 dealers sold: 300 units or more

These sales were in addition to those made for cash or on regular time payment terms. A dealer in Buffalo, N. Y., reported that he found the meter plan "successful business not only in selling new units, but used units as well". And a dealer in Cresco, Iowa, reported that "they help to close some sales that would not otherwise be made".

In the matter of the down payment required on meter plan sales, dealers reported varied practices, with replies ranging from "nothing down" to as high as 33 1/3%. In some dealerships, the down payment required varied according to the customer. Most popular figure, however, was in the neighborhood of 10%, but a surprisingly high percentage of dealers were asking—and getting—down payments of from 11% to 20% on the commercial equipment they sold.

The following tabulation shows the experience of dealers who reported in the survey:

No down payment	39
1% to 10% down	117
11% to 20%	89
21% to 33 1/3%	31
Over 33 1/3%	1
Depends on Customer . .	17

A Birmingham, Ala., dealer reported that he "can get list price on the meter plan with little or no down payment—otherwise cannot."

In response to a question as to who carried the meter plan paper, replies indicated that 40% of the dealers carried the paper themselves, 123 dealers reporting that this was the case in their establishments. Local banks were used by 59 dealers, finance companies by 50, and a combination of bank and finance company by an additional 61 firms.

With the tightening-up of conditions generally during 1949, repossession tended to be higher than had been the case in the preceding year. However, in response to a question on

Continued on page 67

COMMERCIAL

SALES NEWS

NCRSA Aims At Bettering Sales Data, Buyer Relations

QUARTERLY CHECK SET ON MEMBERS' BUSINESS

To provide members with up-to-date information on the status of industry sales, inventories, and accounts receivable, a quarterly survey is being conducted by the National Commercial Refrigerator Sales Association.

These reports will be issued shortly after the end of each quarter and will show a comparison with the same period of the previous year. The information contained in these reports will be for the use of Association members in evaluating their own operations.

RUDOLPH IS PRESIDENT OF PHILADELPHIA GROUP

Richard E. Rudolph, distributor for Super-Cold New York Co., Inc., was elected president of the Philadelphia Commercial Refrigerator Sales Association at the group's June meeting.

Howard Milstein, Royal Store Fixture Co., was elected vice president; Emil Gruler, Gem Refrigerator Co., secretary; and Harry Braverman, Arctic Refrigeration Service Co., treasurer.

NEW DISTRIBUTION PLAN SET FOR WHITING

Whiting Appliance Co., a division of Baltimore Porcelain Steel Corp., Baltimore, Md., is announcing a distributor-merchant plan on the entire Whiting line of appliances which it is now manufacturing.

It was announced recently that the Baltimore firm had purchased the freezer division of Whiting Corp., Harvey, Ill., including dies and fix-

Continued on page 54

DIRECT MAIL LEAFLETS WILL GO DIRECTLY TO CUSTOMERS OF MEMBERS

A public relations program aimed at emphasizing the services members render their customers has been announced by the National Commercial Refrigerator Sales Association.

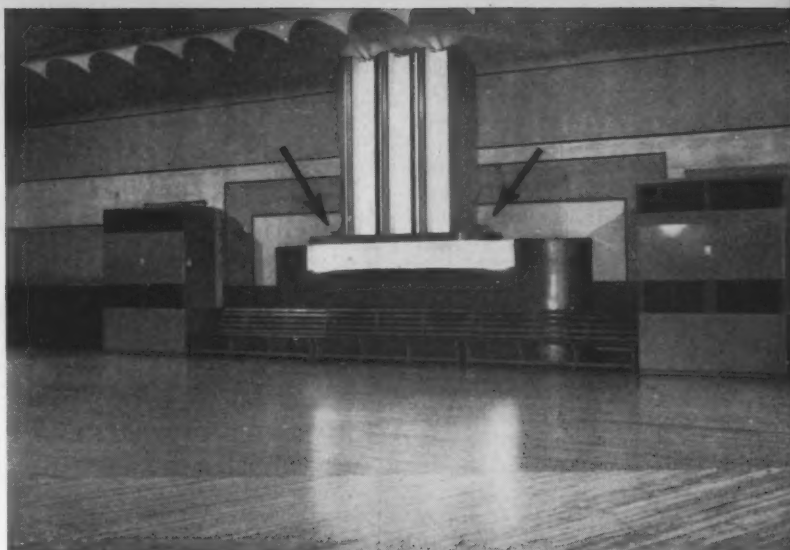
Using an entirely new approach, the Association will go directly to its members' customers to stress the importance of purchasing properly designed and properly styled refrigeration equipment in order to exact the maximum profit from the merchandising of frozen foods, pre-packaged meats, dairy products, and other consumer items. A series of leaflets focusing attention on the services available through the commercial refrigeration equipment distributor will be addressed directly to store owners or managers to further this campaign.

FOURTH annual convention of National Commercial Refrigerator Sales Association will be held at Hotel Astor, New York City, on October 16 and 17. This is a change from previously announced dates.

Outstanding speakers from the industry and from related fields have been selected to present vital information on current industry problems and sales promotion ideas, based on the convention theme, "Pooling Ideas for More Effective Selling".

Preliminary plans for the convention were made at a meeting at NCRSA headquarters in Philadelphia attended by C. S. White, Modernized Equipment Co., Cincinnati, president; I. Rosenberg, Jr., Refrigeration Equipment Co., Pittsburgh, vice president; and Frank D. Stella, F. D. Stella Products Co., Detroit, secretary-treasurer.

HERE ARE TWO of the four 15-ton air conditioners located on the ballroom's main floor; the other two are at the opposite end of the auditorium. Arrows show location of unit disconnect switches. The conditioners are mounted on vibration isolators, and all wiring and water connections are concealed back of the lighted decorative panel between units.



OPEN FOR DANCING . . .

REGARDLESS of the temperature outdoors, the band plays on in the Aragon Ballroom, West 25th St. near Clark Ave., Cleveland—thanks to package air conditioning equipment.

Well known to dance-loving Clevelanders, the Aragon has been in operation for 20 years—but summer business wasn't so good. That was the "slump" season, when people either went to outdoor dancing pavilions or just didn't dance. It was just too darned hot for indoor dancing.

It was about three years ago that Lloyd Meyers, who operates the ballroom, first began to think of air conditioning as an antidote for that let-down in summer business, but the problem wasn't simply that of deciding upon a system and then having it installed; a number of additional factors were involved.

In the first place, the building the ballroom occupies—and which its operators own—is not a new one.

This made the matter of initial cost an important one. The heat load, with people dancing, would be a rather heavy one, which would increase the refrigeration load. Since the building was normally in use only for limited periods of time, the installation of a storage-type plant, naturally, was one solution; but again the cost of necessary duct work and other incident expenses was an item barring acceptance on the part of the management. And the limitations of package-type air conditioners then on the market made the application of these particular units not too practical, from a cost standpoint.

A few months ago, however, larger package-type units hit the market—15-ton package-type units, to be exact—and with these, the ballroom's problem could be solved. Result was that a system of 75 tons capacity comprising five 15-ton package units, was installed by Refrigeration Sales Corp., Carrier dealer.

Four of the air conditioners are installed on the dancing area—two at either end of the auditorium. The fifth is installed in a storage area above and near the front of the main dancing area, with ducts serving a low-ceiling space where dancers tend to congregate between dances, and where check rooms and mens' and womens' lavatories are located. This unit also serves the manager's private office.

The air conditioning system is designed to provide temperatures of 78 F dry-bulb and 50% relative humidity inside the ballroom when outside conditions are 95 F dry-bulb and 75 F wet-bulb. Total refrigeration load is based on 800 people dancing, with the per-person load varying between 500 and 900 Btu, depending upon the degree of activity.

Each of the five 15-ton air conditioners is equipped with two 7½ hp sealed compressors, and each unit has

(Continued on page 69)

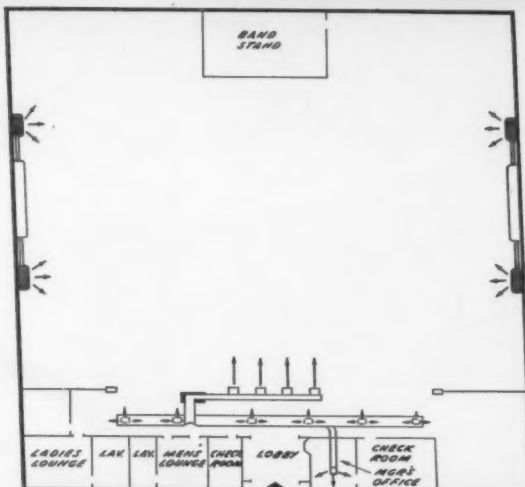


THE FIFTH UNIT (shown above) is installed in a storage area above and at the front of the main dancing area. Insulated ducts carry conditioned air to a low-ceiling area where dancers congregate between sets.

PLUG FOR COOLING (right, above) is this sign at one side of the band stand. The Aragon plays up its new system in all possible ways.

FLOOR PLAN of the ballroom (right) shows the location of the five 15-ton packaged units. Air from the fifth unit, shown at bottom of sketch, is ducted to the low-ceiling area with a branch duct line to manager's office.

ADS LIKE THIS are promoting the new cooling system in Cleveland newspapers. Management of the ballroom expects to build a former "slump" season into a high-profit period.



OHIO'S FIRST AIR CONDITIONED BALLROOM

COOLED BY **CARRIER** REFRIGERATION

DANCE...RELAX
Don't Stay Home and Swelter
"BEAT THE HEAT"



As in the past we at the ARAGON will always provide the finest in DANCING ENTERTAINMENT. NOW dance in cool comfort. Come and enjoy yourself.

Lloyd H. Hays President

ARAGON AVAILABLE FOR RENTAL

"DANCE! Private Good Will"—Companies—Firms—Clubs—Organizations see us about your next Dancing Party. Choice of Rental Arrangements—A few select dates available. Have your next dance in air-conditioned comfort.

CALL TU. 5-3187 or FL. 1-9737

CONGRATULATIONS TO ARAGON

CARRIER AIR CONDITIONING installed by REFRIGERATION SALES CORP., 1127 Carnegie

4209 Fulton Court

SIG ROY BEVERAGE CO.

ME. 1-2455



Remember Dancing is Your Best Entertainment Value!



DANCING EVERY SUNDAY WEDNESDAY SATURDAY

TONITE

Let's Start The Season Off Right

ORCHID GIVEN

to every lady

PORTABLE RADIO GIVEN to holder of lucky ticket

ORRIN IDE

and his Orchestra



TABLES FOR REFRESHMENTS

"ALWAYS THE FINEST BARGE BAND"



PLEASANT SURROUNDINGS • BEAUTIFUL • COMFORTABLY COOL

ARAGON

OHIO'S ONLY REFRIGERATED BALLROOM

"Pleasing Cleveland Dancers for 30 Years"
WEST. 25th, Near CLARK AVE.

Conveniently Located Only 2 Miles From Public Square

Any W. 25th Street Car from Terminal Tower

AVAILABLE PARLOR

Bar of Faber Bros. • Diagonally across from Aragon

demand **DETROIT CERTIFIED VALVES**

*COMPENSATES for PRESSURE DROP-
ELIMINATES STARVED COILS!*



DETROIT'S 777-E EXTERNAL EQUALIZER EXPANSION VALVE

- Simple, compact, and rugged construction.
- Large wrench flats—for standard wrenches.
- Cartridge needle and seat assembly simplifies cleaning and inspection.
- Accessible superheat adjustment.
- Stainless steel and brass throughout.
- Anchored Capillary for strength.
- Polished Flare Faces.
- Ball-Type Needle gives desirable flow characteristics.
- Interchangeable Inlets $\frac{1}{4}$ and $\frac{1}{2}$ SAE.

Now you can give your customers positive protection against faulty display case operation . . . save yourself the loss of time, money and energy caused by unnecessary call-backs! **DETROIT'S** 777-E External Equalizer Expansion Valve assures perfect refrigeration at all times because it reacts simultaneously to both pressure and temperature at the coil outlet, compensating for pressure drop and *positively eliminating starved coils*. Combining all of the many outstanding design features of **DETROIT'S** popular 777 valves, the 777-E is the *only* External Equalizer Expansion Valve specifically designed for 1 and 2 ton Freon-12 capacities. Contact your nearest **DETROIT** wholesaler and ask for **DETROIT'S** 777-E. You'll see for yourself why it's a natural for greater sales and greater profits!

DETROIT

LUBRICATOR COMPANY

5900 TRUMBULL AVE., DETROIT 8, MICHIGAN
Division of **AMERICAN RADIATOR & Standard Sanitary CORPORATION**
Canadian Representatives: **RAILWAY & ENGINEERING SPECIALTIES, LTD.**—Montreal, Toronto, Winnipeg



DETROIT HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL BURNER EQUIPMENT • DETROIT EXPANSION VALVES AND REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS

Serving Home and Industry AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • REMANUS BOLERS • ROSS HEATER • TONAWANDA IRON

REFRIGERATION INDUSTRY *News*

FRIGIDAIRE EXPANDS MORaine PLANT

A \$12,000,000 Frigidaire warehouse and factory building program has been announced by M. M. Roberts, General Motors vice president and Frigidaire general manager.

The expansion program, slated for the firm's Moraine City plant site just outside Dayton, is expected to be completed by early 1952, he said. Construction work probably will begin late this summer.

Under the new building program, Frigidaire's warehouse area at Moraine City would be more than doubled.

He added that the expanded facilities will provide greater flexibility in shifting production from one product or model to another in order to meet normal fluctuations in public demand. Frigidaire now manufactures more than 175 different models, types and sizes of products at its Moraine City site.

The expansion program was revealed shortly after the announcement that Frigidaire had built its 12,000,000th refrigerating unit.

LA CROSSE COOLER EXPANDS AGAIN

Latest plant expansion of La Crosse Cooler Co. centers around a new building now under construction adjoining the main plant which will provide approximately 50,000 sq. ft. of additional floor space to be utilized entirely for production purposes.

This will enable the company to expand its assembly, finishing, refrigeration, and crating departments and will permit greater working facilities in the sheet metal fabricating department, where new equipment recently has been added to handle the increased production.

HEADS ACRMA



A. P. SHANKLIN

of Carrier Corp. is the newly elected president of the Air Conditioning and Refrigerating Machinery Association.

This is the third expansion project since completion of the company's new plant in 1946. It is anticipated that the new structure will be completed by mid-summer.

Along with the overall increase in manufacturing facilities, the new addition also will permit further development of the firm's research, designing and testing departments. The addition of the second assembly line, together with increased man power, will permit practically all of the company's line to be manufactured on a quantity production basis. It also will result in separation of the assembly of beverage cooling and milk cooling equipment.

BATCHELOR JOINS CHASE BRASS

Mead W. Batchelor, until recently executive vice president of the Bridgeport Brass Co., has joined the Chase organization, according to an announcement by Robert L. Coe, president of Chase Brass & Copper Co.

Batchelor will be located in Cleveland, Ohio, as works manager of the two plants operated by Chase in that city.

NATIONAL OUTLETS PLANNED FOR FULLER

National distribution of the rotary compressors for refrigeration manufactured by the Fuller Company, Catasauqua, Pa., has been taken over by Freezing Equipment Sales, Inc., 417 W. Market St., York, Pa., according to Henry B. Pownall, president of Freezing Equipment Sales.

A completely redesigned line of rotary compressors will be announced shortly, based on compressor designs by Fuller and engineering for refrigeration use by Freezing Equipment Sales. The new distributor has successfully installed these compressors in dairy and frozen food plants along the East Coast.

A nationwide distributor organization is planned by Freezing Equipment Sales on this line of rotaries. The largest rotary in the line is equivalent to 15% more displacement than a 15 x 10 4-cylinder reciprocating compressor operating at top speed, the company claims.

3 NEW MEMBERS ADDED BY REMA

Three new members have been added to the roster of Refrigeration Equipment Manufacturers Association. These members, the products they manufacture, and their REMA representatives are:

H. A. Phillips & Co., Chicago; refrigeration controls, float valves, liquid return systems, injectors; representative, Wayland N. Phillips—alternate, W. V. Richards.

Bally Case & Cooler Co., Bally, Pa.; refrigerated display cases, reach-in coolers, walk-in coolers, bottle coolers; representative, George M. Prince—alternate, Leonard Melcher.

Standley & Co., Inc., St. Louis, Mo.; milk coolers, food freezers; representative, W. G. Tobey—alternate, A. J. Anderson.

K. A. WEATHERWAX NOW ACME HEAD

Kenneth A. Weatherwax has been elected president of Acme Industries, Inc., Jackson, Mich., to succeed Roy C. Weatherwax, who died June 23 after an illness of several months.

Roy C. Weatherwax, one of the incorporators of Acme Industries in 1919, was a well-known industrialist, having been a member of the Holton-Weatherwax Co. in his early years and later an organizer and member of several other industrial concerns.

Kenneth A. Weatherwax for the past 10 years has been executive vice president of Acme Industries. Policies and planning of the company will continue unchanged, it was announced.

JORDON DROPS PRICE ON LOW-TEMP CASE

Jordon Refrigerator Co. has announced a price reduction from \$750 to \$680 on its Model OF-9 ice cream and frozen food merchandising cabinet. The reduction was made possible, company officials state, by a combination of increased demand for this model and manufacturing economies which have been affected.

Simultaneously, the company announced that production was well under way on the larger self-service low temperature cabinet, Model OF-17, which will be available for deliveries in August.

SUNROC AGENT

Lester S. Bartlett has been appointed sales agent in Rochester, N. Y., for Sunroc Co. From offices and showroom at 320 Broad St., this agency will handle both sales and service of Sunroc water coolers in the Rochester area.

WE TAKE CARE OF

Eastern

CONDENSATE

DISPOSAL UNIT



Designed for the air conditioning field, here is a completely automatic, foolproof unit that removes condensate fluids from the receiver tank and pumps them to an outside drain. Simple to install . . . Low operating cost . . . Totally enclosed motor . . . Compact, rugged, rustproof construction . . . Quiet and reliable in operation.

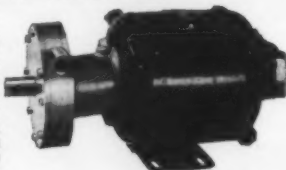
SPECIFICATIONS

Tank — Approximately 1½ gal. capacity with ¾" inlet, ½" outlet. Brass with black enamel outside.
Pump—Bronze centrifugal pump. Delivery app. 4½ GPM at 0 PSI and shut off of 12½ PSI.
Motor — 1/40 HP 3450 RPM, single phase, 60 cycles, 115 volt, totally enclosed, ball bearing, capacitor start motor.

Control — Controlled by a float operated switch, so set to pump out app. 0.8 gal. of condensate at each operation. Built-in check valve prevents the outlet line from draining back into the tank.
Overall Dimensions—5¼" wide; 9¾" long; 12 15/16" high. Weight 21 lbs.

Investigate Eastern's Proven Pumps for ICE CUBING MACHINES

Designed for continuous duty under severe operating conditions, the Eastern Model D-11 Pump is a heavy duty centrifugal pump. Size: 10" x 5½" x 5". Weight: 18 lbs. Power: ½ HP, heavy duty, split phase, fully enclosed, induction motor. Available in 110 or 220 volts A.C. Maximum output: 8 GPM at zero pressure. Maximum pressure: 14.5 PSI at shut off. Furnished in special alloys for hazardous service. Built for dependable service.



MODEL D-11

WRITE FOR COMPLETE CATALOG

Dept. A-11

Eastern INDUSTRIES

INCORPORATED
296 ELM STREET
NEW HAVEN, CONN.

CAR-FULL OF COOLING FOR PEORIA STORE



A whole freight car full of General Electric packaged air conditioners arrives at Peoria, Illinois, where they will soon provide air conditioning for the entire five-story building of Cohen Furniture Co. Shown greeting the arrival are, left to right, Marion Culp, service manager, and J. R. Eppel, vice president and general manager, of Cohen Furniture Co.; S. D. Darley, vice president, and W. A. Somers, branch sales manager, of R. Cooper, Jr., Inc., G-E distributor, through whom the order was placed. The shipment included 21 type FD-50 self-contained units totalling 105 tons.

JOHNS SALES ADDS 3 NEW LINES

Johns Sales Associates, Newark, N. J., firm of manufacturers' agents headed by T. W. Binder and Harold Binder, has announced its appointment as national sales agent for Temp-Rite-Aire room conditioners, Floco thermostatic expansion valves, and Koldwave instantaneous cooling coils for water, soda, and beer.

Until now the firm has confined its sales activities to New Jersey and New York state. It will continue to act as sales agent in this territory for those lines which it has been handling.

ance Service Co., Houston; B. W. Keeland Heating Co., Houston, and M. L. Garza, Laredo.

NEW WOLVERINE ADDRESS

Wolverine Tube Div. has announced that effective July 1 all sales will be handled by its new divisional sales and advertising offices at 1850 Guardian Bldg., Detroit 26. Sales to wholesalers will continue to be handled by the Detroit plant sales department at 1411 Central Ave.

MARLO UPS PRICES

Effective July 1 Marlo Coll Co. increased by 5% prices of all its products with the exception of cooling towers, DUC unit coolers, and UC unit coolers. The increase was attributed to advancing costs of raw materials.

USAIRCO APPOINTS 11 TEXAS DEALERS

Appointment of 11 new dealers in Texas for United States Air Conditioning Corp. was announced recently. They are: Henderson's Refrigeration, Austin; Conti Equipment Co., Houston; O.K. Hughes Co., Houston; Sims Refrigeration, Port Arthur; Roberts Construction Co., Kirbyville; Gulf Refrigeration Sales and Service Co., Ltd., Corpus Christi; Builders Distributing Co., Harlingen; Service Electric Co., Pasadena; General Appli-

RECOLD TO RAPSCO

Refrigerating & Power Specialties Co., with headquarters in San Francisco and offices in Portland, Tacoma and Seattle, has been appointed distributor for Recold refrigeration and air conditioning equipment in Oregon and Washington.



Dayton's "take-home-a-spare" plan

*doubles your
V-Belt business!*



Here's how Dayton's "take-home-a-spare" plan can double your belt business. When a customer asks for a replacement V-Belt, offer him *two* Dayton belts, make the simple statement: "If a belt breaks on Sunday or a holiday (seems like they usually do!) you have a replacement Dayton V-Belt for that emergency. It pays to take home a spare."

Remember, the customer has had a troublesome breakdown of his equipment, and is in the mood for the "insurance" that a spare belt will give him. So he says: "O.K.—better give me the spare."

You double your belt sales, get first call to make any non-emergency installation of the spare. Dayton's "take-home-a-spare" sales plan includes an assortment of fast-selling belts, a belt matching-stick, store and window posters, display suggestions. If you'd like to move belts "on the double", call the Dayton jobber or write:

DAYTON RUBBER COMPANY, DAYTON 1, OHIO

Dayton Rubber

WORLD'S LARGEST MANUFACTURER OF V-BELTS

CMH offers

the complete line of flexible metal hose products for refrigeration and air conditioning

SERVICE HOSE

CMH Refrigerant Charging Lines are light-weight, liquid-tight quality charging units with steel liner and neoprene cover and packing for all types of refrigerant. Non-deteriorating, non-corrosive, non-collapsible, non-kinking and non-seeping; will withstand twisting and repeated flexing. Couplings are finger tightening.



VIBRA-SORBERS

CMH Rex Vibra-Sorbers, the preferred vibration eliminators for refrigerant lines, provide the economical, dependable way to isolate compressor noise and vibration. They guard against loss of valuable refrigerant; make quieter installations and reduce piping failures due to vibration. Sizes for all needs.



TUBING ARMOR

CMH Refrigeration Tubing Armor is of fully interlocked construction in sizes for every need. Available in aluminum, brass, stainless steel and galvanized steel to meet local codes and special installation requirements. Economical, yet rugged and durable.



BULK REFRIGERANT HANDLING HOSE

CMH Rex-Weld Flexible Metal Hose offers the ideal means of conveying bulk refrigerants. Combining durability with high flexibility, it withstands high or low temperatures, high or low pressures. Available in bronze or steel.



You can secure all your flexible metal hose needs for refrigeration and air conditioning service from a single, reliable manufacturer. For over 48 years, CMH has manufactured all its flexible metal hose products to provide users with the complete dependability that is demanded in this type of service.

Write today for literature describing the items shown above, mentioning those in which you are interested.

CHICAGO METAL HOSE CORPORATION

1321 S. Third Ave., Maywood, Ill.

Plants at Maywood, Elgin and Rock Falls, Ill.
In Canada: Canadian Metal Hose Co., Ltd., Brampton, Ont.



CMH

ONE DEPENDABLE SOURCE
for every flexible metal hose requirement

BEN-HUR SHOWS "R.O.P." FREEZER LINE



R. C. Graves (left), sales manager of Ben-Hur Mfg. Co., and E. J. Morrison of Morrison Advertising, Inc., introduce the new Ben-Hur line of R.O.P. (Record of Performance) farm and home freezers at a meeting of the firm's district sales managers. The "R.O.P." tag which will appear on all Ben-Hur freezers is a replica of test charts made during the extensive laboratory tests made on every freezer before shipment. While this testing has been a standard practice at Ben-Hur for many years, the company feels that it is so important to the freezer owner that the "record of performance angle" now is being featured in the firm's national promotion program.

TAGLIABUE NAMES NEW SALES AGENTS

Tagliabue Instruments Div. of Weston Electrical Instrument Corp. has announced appointment of the following Weston district sales representatives who are now, in addition, handling the Tag line:

C. L. Huffman, Russell F. Clark Co., Pittsburgh; C. W. Stafford, C. B. Fall Co., Saint Louis; E. F. Schimbor, Herman E. Held, San Francisco; R. C. Staub, Beedle Equipment Co., Cincinnati; G. O. Miller, Schiefer Electric Co., Inc., Syracuse; T. J. Cunerty, Powerlite Devices, Ltd., Toronto; A. R. Hough Co., Knoxville; Edward S. Stevers, Los Angeles; T. S. Cawthorne Co., Detroit; Eicher & Co., Seattle; Ward Engineering Co., Inc., Orlando and Jacksonville; W. J. Keller, New Orleans; and W. H. Dittman, Cowperthwait & Brodhead, Boston.

In the Colorado territory, Peterson Co. of Denver handles sales of chemical and industrial thermometers, hydrometers and moisture meters; while Burson Sales, Inc., Denver, handles Celestray pyrometers and the Tag line.

UNITED REGISTERS NU-BLOK NAME

The United States Patent Office has just advised the registration of the trademark "Nu-Blok" by United

Manufacturing & Service Co., Milwaukee, Wis., engineers and manufacturers of "Unilectric" electric wiring systems and harnesses.

The Nu-Blok and "Nu-Blok, Jr." names have been used to describe specially designed junction blocks used in wiring systems to contain and splice several types of leads. They feature new "short-proof" splice protection, built-in strain relief, and easy connection and disconnection in product assembly and servicing. The "Junior" model is made with a receptacle for standard attachment cap, and both can be furnished with extra plug connection leads.

HUBBELL CORP. MOVES PLANT

Hubbell Corp., manufacturer of valves, controls, and regulators, has announced removal of its office and plant from Chicago to Hawley Road, Mundelein, Ill. Mail address of the new plant is Post Office Box 700.

SEEGER EARNINGS

Seeger Refrigerator Co. showed net earnings of \$1,685,391 after federal income tax provisions in the six months ended February 28, 1950, compared with \$1,837,050 after taxes in the corresponding period a year before.

SPECIAL NEWS SECTION PLUGS ROOM COOLERS

Capitol Distributors, Inc., Dallas appliance distributor, has sponsored what is believed to be one of the largest concentrated newspaper advertising efforts ever made on behalf of room air conditioners.

On Sunday, May 21, Capitol, Dallas distributor for Remington room air conditioners, ran a special 6-page section in the Dallas Daily Times Herald entirely devoted to Remington news and advertising.

Sixteen retail dealers were represented with individual advertisements in this section, using space units varying from a full page down to small one-column and two-column ads.

Sales results on the retail level were immediate and highly satisfactory, according to E. A. Bonneville, general sales manager for Remington Air Conditioning Division, Remington Corp., who stated that several weeks after the special section was published the effects of this concentrated promotion were still being strongly felt by all Remington dealers.

"Capitol Distributors agree with us," said Bonneville, "that the section was far more valuable than the

PRIZE WINNING TUBE BENDERS RECEIVE AWARDS



Jim Marshall (far right) of Standard Brass & Mfg. Co., refrigeration supplies wholesaler, congratulates Charles Attison, Rester Refrigeration Service, winner of second place in the tube bending contest sponsored by the wholesaler in connection with a product showing and barbecue held in Baton Rouge, La., which drew 286 servicemen and engineers from the city and the surrounding area. Attison is flanked by first prize winner Edward LeBlanc (behind table) of Pavy Refrigeration Service, and Warren J. Tullier, also of the Rester organization, who won third prize. At extreme left is Harry Pearson of Imperial Brass Mfg. Co., Chicago, which provided the fittings and tube bending problem used by the contestants.

same number of ads scattered in regular editions. The carefully written news-type stories really 'sold' the benefits of room air conditioning to the reader, and the adjacent ads

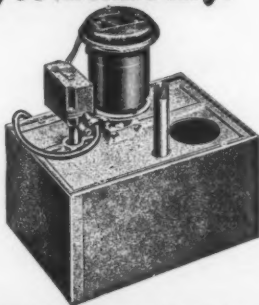
served to amplify their effect and direct the customer to the dealer."

Cost of the promotion was shared by dealer, distributor and manufacturer under Remington's plan.

DIPPING *eliminated...*
quickly, quietly, economically!

Sutton
AUTOMATIC
CONDENSATE DISPOSAL
UNIT

**Pumps Up to
a 22-ft. Head!**



Specially designed for the disposal of water and other condensate liquids which collect in air conditioning equipment and similar apparatus. Completely self-contained. Unit is connected to apparatus so that liquid flows into inlet of receiving tank. At a predetermined height, pump starts automatically and delivers condensate to disposal point. Large capacity, high pumping head ideal for many other applications including draining of de-frosting water from meat and dairy cases and similar equipment remote from sewer connection. Non-Automatic Condensate Disposal Unit, Automatic and Non-Automatic Pump Units only (less tank and check) also available.

SPECIFICATIONS

TANK Approx. 2 1/2 gals. capacity with 3" inlet, 1/2" outlet. Steel with corrosion-resistant baked enamel finish.
PUMP All-brass centrifugal. Delivery approx. 3 1/2 GPM at 10-ft. head to 1 GPM at 22-ft. head. Shut off at 24 ft.
MOTOR 1/15 HP, single phase, 60-cycle, 115-volt A.C. (110-volt D. C. on special order)

CONTROL Automatic float switch set to pump approx. 3/4 gal. of condensate at each operation. Check valve in outlet prevents liquid from draining back into tank.

OVERALL DIMENSIONS 8" wide, 7" deep, 12" long. Height to top of pump, 12". Weight approx. 20 lbs.

WRITE FOR LITERATURE AND PRICES

Sutton Manufacturing Corp.
112 W. WILSON AVENUE NORFOLK, VIRGINIA



*Super
Smooth!*

An entirely new Johnson process is now producing Formica table tops, counters and bars with *super smooth* surfaces. Surface smoothness prolongs the life and beauty of furniture and fixtures because wear occurs around irregularities.

The modern Johnson Plant is efficiently equipped to give you prompt delivery of a wide selection of Formica Tops in colors and sizes to fit your customers' requirements.

The new Johnson Super-Smooth Formica Tops have no equal. Johnson, now more than ever, is your profit line.

Write for NEW Johnson Catalog and Price List

Johnson

PLASTIC TOPS, INC.

69 North Street, Elgin 12, Illinois

Stain Proof
Cigarette Proof

FORMICA

CONTRACTORS . . .

Continued from page 37

create an additional market for sales. Rather, it merely deprives the established dealer, upon whom the manufacturer originally depends, of the sales that should rightfully be his.

"It is only fair that our members protest directly to any equipment manufacturer whose operation is inconsistent with the accepted system of distribution, so that such manufacturer can be impressed not only with the unfairness of his actions but with the expressed opposition to them.

Protests have been made in several areas and have resulted in a better understanding between manufacturers and contractors, and it is logical to assume that protest on a national basis would be proportionately successful as far as elimination of this practice is concerned.

"Apparently the objections to this practice based upon 'good business' are not sufficient in themselves to discourage or to eliminate the practice, so it would seem that the only answer is through legal means. For that reason, we have initiated a program whereby the legal aspects of this condition are under consideration by the Federal Trade Commission and the

Anti-Trust Division of the Department of Justice. It is quite generally agreed that the usual restriction included in the contract between a frozen food processor and his outlet as to the use of cabinet for display and sale purposes of merchandise of the firms supplying the equipment is in violation of the present regulations of the Federal Government concerning fair trade practices.

"In addition, the terms under which the equipment is bought by a dairy or an ice cream manufacturer or a frozen food processor are being studied to determine the validity of the discounts given to such class of purchasers. Of course, the terms by which the dairy, ice cream manufacturer or frozen food processor furnishes the equipment to a retailer are being analyzed to make certain that both transactions are consistent with the Federal regulations.

For a Sounder Industry

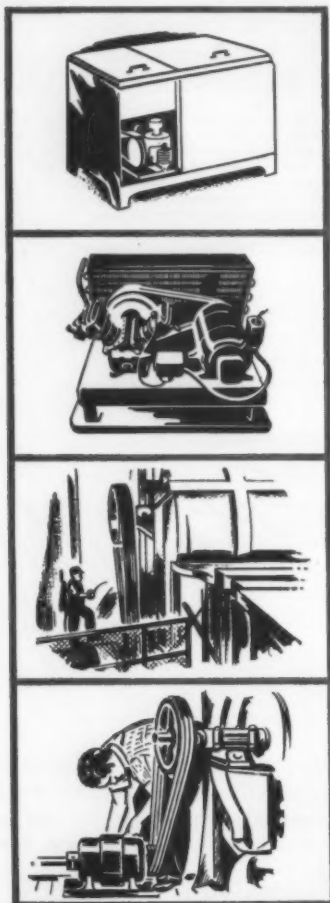
"It is hoped that application and enforcement of the provisions of the Sherman, Clayton, and Robinson-Patman Acts will practically eliminate this practice. For that reason, this office is cooperating with the Federal Trade Commission and the Anti-Trust Division of the Department of Justice in an effort to place the industry on a sound basis—a basis that recognizes the rights and the responsibilities of each group within the industry.

"We recognize that some manufacturers operate through recognized channels in distributing their merchandise and are thereby penalized by the actions of other manufacturers who sell equipment indiscriminately both as to price and as to type of purchaser. We are of the opinion that this campaign will serve the interests of the sound manufacturers by forcing all other manufacturers to comply with all the regulations governing distribution of merchandise. We are equally aware that our efforts will be not only criticized but opposed by that group of manufacturers whose short-sighted operations have disrupted the industry and have given them a temporary advantage over the manufacturer who recognizes his responsibilities to the industry. We are confident that our efforts will be successful in the elimination of an old practice which has injured the industry tremendously.

Practice Isn't Popular

"As far as ice cream manufacturers are concerned the opinion generally expressed by them indicates their desire to terminate this practice as soon as possible and devoting their entire facilities to the distribution of ice cream and thus withdraw from the refrigeration business. For that reason, we are assuming that our effort will be supported by the more pro-

Continued on page 52



Your **NEW** *Gilmer* Belt Bible is ready— it's your guide to more V-Belt Sales!

Here's the latest "Belt Bible" from Gilmer!—it's a fact-packed reference guide to Gilmer V-Belts for household and commercial refrigeration units; bottle, milk, and beverage coolers; ice cream cabinets; air-conditioning units; air compressors. In short, a complete V-Belt library in one convenient volume! Get your copy today. Write, requesting the new Gilmer Refrigeration V-Belt Guide!

The HOW and WHERE of better V-Belt business

HOW: Keep your Gilmer stock complete—a variety of V-Belts and also the other refrigeration necessities in the Gilmer line; tape, shock-pads, wire, hose, packing.

WHERE: Industrial plants, office buildings, theaters, restaurants, super markets, grocery stores, hospitals, institutions, department stores, ice cream manufacturers. In short, any business that uses refrigeration can give you business!

**Buy Gilmer Products
through your Gilmer Distributor**

L. H. GILMER COMPANY
TACONY, PHILADELPHIA 35, PA., U. S. A.

Division of United States Rubber Company



BRUNNER
SINCE 1906

REFRIGERATION helps you serve better

**TO
COMMERCIAL
REFRIGERATION
READERS**

This is the type of advertising Brunner directs to refrigeration buyers. *It is producing business.* If you are not handling Brunner, write us. A factory representative will call on you. No obligation.

**For Refrigeration Economy and Efficiency
Standardize on BRUNNER**

Cut servicing costs. Simplify your problems of selection, installation, maintenance and replacements. Standardize on Brunner Refrigeration Condensing Units.

40 sizes and types from 1/4 hp to 75 hp make available the exactly right unit for every case, walk-in, storage or air conditioning application.

Cost-conscious operators right across the country have long *preferred* Brunner's because the records proved their dependable efficiency and long service life.

Too, Brunner dealers are everywhere—as close as your telephone—and they understand your problems and how to release you from them.

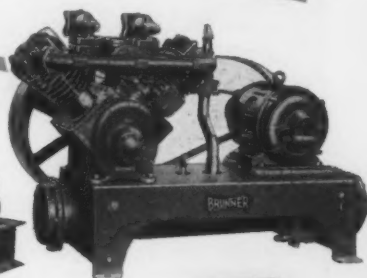
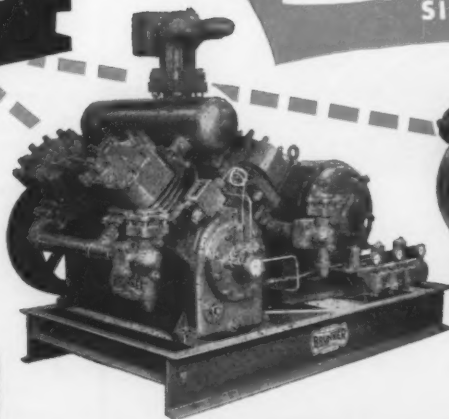
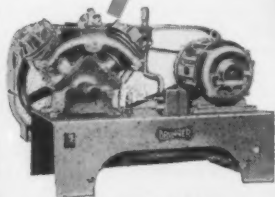
BRUNNER MANUFACTURING CO., Utica 1, N.Y., U.S.A.

● *We would like to put you in touch with the Brunner representative nearest you. Talk refrigeration with him. You'll find him most helpful. No obligation in dropping us a line.*

**REFRIGERATION
CONDENSING UNITS**

...a size and type
for every purpose

**AIR AND WATER
COOLED MODELS
1/4 HP. to 75 HP.**



BRUNNER
SINCE 1906

BRUNNER
SINCE 1906

AIR CONDITIONING

Self Contained Units in 4 sizes: 3 - 5 - 7½ and 10 HP.
Remote Installation Types from 5 to 75 HP.



CONTRACTORS . . .

Continued from page 37

government contact work. He has most recently been executive director of the Trailercoach Dealers Association, and before that executive secretary of the American Seed Trade Association.

He has been a labor relations specialist in Washington, and has had industrial relations experience in the aircraft and chemical industries.

In his greeting to members, pub-

lished in a RACCA bulletin following his appointment, O'Donnell said:

"It would appear that there is room for improvement in the relationship between some segments of the industry. It is elementary that each group has its function to perform and is entitled to operate towards that end without interference (or infringement) by any of the other groups. Failure to recognize these restrictions results in disharmony, inefficiency and bad trade relations—and in some instances bad public relations.

"Perhaps the most effective manner to accomplish an understanding of the problems of each segment of the industry is to have an *active* industry-wide committee, the function of which would be to study all matters which affect the relationships between the various groups.

"Thus, if a manufacturer wanted clarification or explanation of some wholesaling or contracting practice, it could be submitted to the committee to study and to make recommendations thereon. So, too, a contractor or a jobber could submit his grievances or suggestions to such committee.

"I am sure that such an arrangement would eliminate a large amount of critical talking which at the present time is based largely on a lack of understanding of the problems of the 'other fellow'. Frankly, the present cooperative attitude of the various groups within our industry assures the success of the above program, which is actually aimed at expanding the present cooperation to the point of confidence."

NEW CHATTANOOGA FIRM

Two companies in Chattanooga, Tenn., have consolidated to form the firm of Lilie & McCall, Inc. One of the previous firms formerly was known as General Equipment Co., headed by B. C. McCall, a director of RACCA. Located at Chamberlain and Dodds Sts., the new firm specializes in hotel, restaurant and dairy supplies and equipment.

BY-PASS SELLING . . .

Continued from page 50

gressive members of the ice cream manufacturing industry.

"At the present time we cannot expect similar cooperation from frozen food processors, so our efforts must be extended to show that group the objectional aspects of the practice.

"This office has repeatedly expressed its recognition of the functions and the rights of each segment of the industry. The time has come when we must express and promote the rights of the industry as they pertain and are affected by other industries. We would like to have ice cream manufacturers sell ice cream, the frozen food processors sell frozen food, and the refrigeration industry sell refrigeration. It is believed that our approach is the most feasible and will be the most effective way to accomplish this plan."

THE NAME IS . . . FAIRBANKS-MORSE

FOR MORE
IN *Motors*



Synchronous Motors



General Purpose Motors



High Torque Compressor Motors



Axial Air-Gap Motors

FOR MORE
IN *Pumps*



Side-Suction Centrifugal Pumps



Built-together Centrifugal Pumps



Vertical Deepwell Turbine Pumps



Westco Pumps



Split-Case Centrifugal Pumps

You'll get more . . . in performance, efficiency and satisfaction . . . by relying on Fairbanks-Morse as your source for motors and pumps. With Fairbanks-Morse, you are not limited in your selection . . . the broad line enables you to get the right unit for

your individual requirements. You deal with motor and pump experts . . . men who are familiar with your problems. For more in motors and pumps, consult your nearest Fairbanks-Morse Branch or write Fairbanks, Morse & Co., Chicago 5, Ill.



FAIRBANKS-MORSE,

a name worth remembering

DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES
HOME WATER SERVICE AND HEATING EQUIPMENT • RAIL CARS • FARM MACHINERY

AT YOUR SERVICE!



STEEL SALES CORP.

3348 S. PULASKI ROAD, CHICAGO
529 S. SEVENTH ST., MINNEAPOLIS
1916 N. MERIDIAN ST., INDIANAPOLIS
227 WERBY BLDG., KANSAS CITY
1002 MICHIGAN NAT'L BANK BLDG.,
GRAND RAPIDS
5151 WESSON AVE., DETROIT
4565 MCREE AVE., ST. LOUIS
647 W. VIRGINIA ST., MILWAUKEE

THE HAMILTON STEEL CO.

12875 TAFT AVE., CLEVELAND
2505 UNION CENTRAL BLDG. CINCINNATI

FORT DUQUESNE STEEL CO.

1200 GALVESTON AVE., PITTSBURGH

EDGCOMB STEEL CO.

D ST. BELOW ERIE AVE., PHILADELPHIA
527 ATANDO AVE., CHARLOTTE
STANDARD OIL BLDG., BALTIMORE
101 E. MARKET ST., YORK
201 EMPIRE BLDG., KNOXVILLE

EAGLE METALS CO.

3628 E. MARGINAL WAY, SEATTLE
809 DEKUM BLDG., PORTLAND, ORE.
EAST 41 GRAY AVE., SPOKANE

MANUEL T. FINE CO.

7001 SANTA MONICA BLVD., LOS ANGELES



SILVALOY

SILVER BRAZING ALLOYS

The distribution of SILVALOY Silver Brazing Alloys extends from coast to coast from 21 centers, as indicated on the map above. This means speedy delivery from near-by stocks, ease in placing orders, and personal contact with local representatives. Another point: Often technical data is needed quickly. The men handling SILVALOY Silver Brazing Alloys are splendidly equipped to advise you on the best alloy for any specific purpose. The table below shows the six most widely used. There are many others, of course, in our complete line.

	SILVER CONTENT	MELTING POINT	FLOW POINT
SILVALOY 15	15 %	1185°F	1280°F
SILVALOY 35	35 %	1125°F	1295°F
SILVALOY 45	45 %	1125°F	1145°F
SILVALOY 50	50 %	1160°F	1175°F
SILVALOY 503	50 %	1195°F	1270°F
SILVALOY 355	56 %	1152°F	1203°F

APW No. 1200 Universal Flux recommended
for use with these alloys.

THE AMERICAN PLATINUM WORKS

231 NEW JERSEY R. R. AVENUE NEWARK 5, N. J.

COMMERCIAL SALES . . .

Continued from page 41

tures, and had moved the equipment to Baltimore. Whiting Appliance Co. has added a line of refrigerators, washing machines, gas conversion burners, room air conditioners and radio-phonograph combinations.

The Whiting line will be sold through Distributor-Merchants operating direct from the factories and many of them will form Whiting Appliance Centers. These will be en-

tirely home-owned and home-operated retail outlets with direct buying connections with the factories.

NCRSA SIGNS UP 5 NEW MEMBERS

Five new members recently have been admitted to membership in the National Commercial Refrigerator Sales Association. These new members are: S. W. Davis, Jr., Inc., Greensboro, N. C.; Electric Products, Inc., Pittsburgh, Pa.; Grocers Equipment Service Co., Green Bay, Wis.; New England Sales Corp., Providence, R. I.; E. A. Bardelmeier, Peoria, Ill.

GETS TO MOISTURE TRAPPED IN EXPANSION VALVE

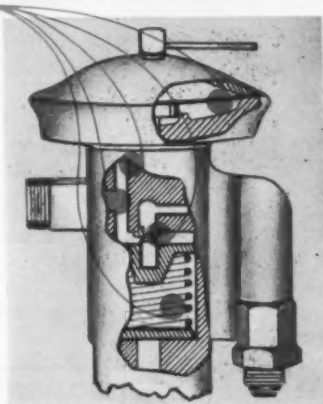
The expansion valve is an excellent trap. It can hold moisture beyond the reach of ordinary driers.

Thawzone reaches this moisture easily. Billions and billions of Thawzone molecules travel to every corner, pocket and elbow in the unit. For it takes only one drop of moisture to cause a "freeze up". This liquid drier reaches every last drop.

Why Hold Moisture When You Can Destroy It?

As long as moisture is present you never can tell when it will break loose and start trouble. It may be two hours or two weeks after your service call. The way to avoid callbacks that annoy customers is to destroy the moisture. Thawzone actually destroys moisture. It cannot return. Hot weather or changes in the balance of the system cannot set moisture free if it has been destroyed by Thawzone.

Thawzone is a "fast worker", too. It circulates throughout the average unit in 2 minutes. This saves you man hours and gets the unit started sooner.



Any unit containing "Freons", methyl chloride, methylene chloride, "Carrene" or isobutane may be dried with Thawzone. Suitable for both open and hermetic units. Your wholesaler has Thawzone.

HIGHSIDE CHEMICALS CO.
Clifton, N. J.

THAWZONE®

The Only Product That
Destroys Water...
and Reaches All of it

A SLOW-DOWN in his small produce jobbing business was a good break for Louis Lista, whose small store at 56th and Whitby, in West Philadelphia, has recently been remodeled with astonishing results.

"I would probably still be doing a small business," said Lista, "if my jobbing business hadn't dropped off, with slow-paying accounts and some bad ones."

Lista explained that he decided to concentrate more effort and financial resources on his retail outlet. Working with a refrigeration firm (Engineering and Refrigeration, Inc.) he installed new refrigeration equipment, shelving and lighting.

Business has doubled in his fruit and grocery departments, and his meats, now carried for the first time in his store, are "drawing in customers I never saw before", he says.

Equipment installed in the Lista market includes a service-type meat case, a self-service produce case, and a self-service dairy case.

STORE EQUIPMENT FIRM FORMED IN MILWAUKEE

Federal Store Equipment Co., Inc., has been formed at Milwaukee, "to engage in and carry on a business for the purpose of selling and manufacturing refrigerating equipment, store equipment, fixtures and furniture, etc.". Capital stock is to consist of 1,000 shares of common at \$100 per share par value. Incorporators are Robert O. Dieringer, Omer M. Larson and Robert A. Ramsey.

HANDLE USAIRCO LINE

Appointment of 11 new dealers for United States Air Conditioning Corp. in the North and South Dakota, Minnesota, Wisconsin and Upper Iowa area was announced recently.

They are: Fleming's Refrigeration Co., St. Cloud, Minn.; Dwight Johnson and Johnson Co., Wilmar, Minn.; Larson-Olson-Hanson Co., Watertown, S. D.; B & F Heating and Ventilating Co., Sioux Falls, S. D.; Art Greenberg Sheet Metal Works, Grand Forks, N. D.; Jensen's Heating Service, Inc., Moorhead, Minn.; Sun-Ray Fixture Manufacturing Co., Rockford, Ill.; Jerry's Refrigeration Co., Wausau, Wis.; Tri-City Heating and Air Conditioning, Rock Island, Ill.; Dick Teela & Lund, Oshkosh, Wis., and Pierre Aircon, Inc., St. Paul, Minn.

SALES SLANTS . . .

Continued from page 38

shops in the neighborhood expect anyone to come there when our shop is so comfortable?"

Try, whenever you get the chance, to patronize your customers, and to turn business their way. They appreciate it. When I say patronize them, I mean to do it *after* you make your sale. Don't try to convince them to buy from you because of your purchases. They know that's phony. I don't remember ever buying a drink from a tavern prospect.

It's as old as selling—Using the User. But it's sinfully ignored by most of us. Your best prospects come from your satisfied users. They have some idea of price—which is certainly not true of cold canvass prospects or prospects from advertising. Your customer's prospects know about you and your company, and the quality of job you do. That's a tremendous asset. Don't ever forget—there's gold in them thar customers!

* * *

Author's Note: This series of articles was written in an attempt to pass on to others some of the things I myself have learned while trying to improve my own sales batting average in the Air Conditioning business. Almost every bit of information it contains has been picked up from a lost sale. If, in your travels from doorbell to doorbell, it saves one sale for you, I will feel rewarded.

WINS AWARD



C. Milton Wilson (right), general sales manager, Anemostat Corp. of America, receives the Certificate of Merit for outstanding product literature from Lessing W. Williams, chairman of the jury of award, American Institute of Architects, at that group's annual convention in Washington, D. C. Anemostat's new selection manual brought the company the citation.

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

MYERS NEW PRESIDENT OF WESTINGHOUSE SUPPLY

The board of directors of the Westinghouse Electric Supply Co. has elected John F. Myers as president to succeed David M. Salsbury. The change becomes effective on July 1.

Salsbury asked several months ago to be relieved of his position so that he could return to the West Coast for the sake of the health of his family. Effective July 1, he will become vice president in charge of Texas and Pacific Coast operations of the company.

CORRECTION

The prize contest conducted at the recent Midwest Educational Conference in St. Louis was sponsored by Refrigeration Equipment Wholesalers Association (REWA), and not by Refrigeration Equipment Manufacturers Association (REMA), as was stated on Page 41 of our July issue. Prizes for the contest were furnished by REWA, and the idea of presenting a plaque to the exhibitor whose display was voted "most helpful" was REWA's, too. The error was purely a typographical one.

BEST EFFICIENCY

PEERLESS PIE PLATE COIL

USES ALL THE FIN AND TUBE

The Peerless Pie Plate Coil utilizes all of the cooling surface, fits in less space, is designed compactly for maximum efficiency.

This power packed round coil of improved evaporation design is ideal for such cooling applications as direct draw bars, soda fountains, reach-in refrigerators, etc.

PIE PLATE BLOWER UNIT

	CAPACITY	DIMENSIONS	WEIGHT	Furnished w/ fan guard
MODEL NO. 82V	85 BTU/Hr./1° T. D.	6 1/4" D x 8 3/4" W x 9 1/2" H	7 1/4# net	List Price \$44.50— Freight Allowed
MODEL NO. 83V	110 BTU/Hr./1° T. D.	7 1/4" D x 8 3/4" W x 9 1/2" H	9# net	Furnished w/ fan guard List Price \$54.00— Freight Allowed
*MODEL NO. 103V	135 BTU/Hr./1° T. D.	7 3/4" D x 10 1/8" W x 11 1/4" H	11 1/2# net	Furnished w/ fan guard List Price \$65.00— Freight Allowed



SOLD THROUGH LEADING REFRIGERATION SUPPLY WHOLESALERS

• For superior performance specify all these PEERLESS products: Flash Coolers, Flash Coolers, Dome and Unit Coolers, Ice Cube Makers, Fin Coils, Oil Center Coils, Expansion Valves and Capacity Boosters. Write for Details.

PEERLESS of AMERICA, Inc.

1501 N. MAGNOLIA STREET

CHICAGO 22, ILLINOIS

PEERLESS of AMERICA, Inc.
1501 N. Magnolia Street
Chicago 22, Illinois
Send for full information on
Peerless Pie Plate Blower Unit.

Name _____
Company Name _____
Address _____
City _____ Zone _____ State _____

clean
up
with

QUICKEE
America's
fastest-acting, fastest-selling
WATERLESS HAND CLEANER
made with
gentle Lanolin
fortified with
Cholesterol

Removes
grease, grime,
paint, tar, mast-
ics, etc. without
water. Just rub
it on . . . and
wipe it off!

For your own
use or for
re-sale get
QUICKEE
and CLEAN UP!

TUDOR
CHEMICAL
SPECIALTIES, INC.
NEW YORK 52, N.Y.

Servicemen!

**FOR MAXIMUM
EFFICIENCY
USE
CHICAGO SEALS AND
VALVE PLATES**



**CHICAGO
SEAL CO.**

332 S. HOYNE AVE.
CHICAGO 12, ILL.

LITERATURE

The publications listed below are available to readers without charge. Simply list on the postcard in this issue the key numbers of the items you wish to receive. Your requests will be forwarded directly to the companies concerned.

H1—Meat Supply Catalog . . . A 68-page catalog (No. 75) available from Koch Supply Co., offering a wide range of supplies, equipment and machinery to all branches of the meat industry. General guide at front of catalog lists 20 major classification of goods available for prompt delivery, including several special items on which patents have been granted or are pending.

H2—Ice Cream Equipment . . . A new 8-page two-color catalog issued by Sweden Freezer Mfg. Co. to give a comprehensive picture of the scope of its line of batch and continuous ice cream freezers. Emphasis is on soft ice cream freezing and dispensing, with a page devoted to food costs in various methods of dispensing. Line of hardening-dispensing cabinets is also shown.

H3—Condensing Units . . . A new 8-page chart illustrating the complete line of Mills compressors and condensing units. Designated as Chart 204-5, it contains up-to-date specifications, capacities and essential data on air-cooled $\frac{1}{4}$ to 3 hp, water-cooled $\frac{1}{8}$ to 10 hp, and combination air-and-water-cooled $\frac{1}{8}$ to 3 hp.

H4—Ammonia Valves . . . A new catalog (1950) issued by the Cyrus Shank Co. containing valuable information on ammonia valves for refrigeration plants. Includes descriptive data, photos, line drawings and specifications on shut-off and line valves, gauge sets, relief valves and accessories.

H5—Renewable Fittings . . . A 4-page folder (05-2) issued by Eclipse-Pioneer Div. of Bendix Aviation Corp. describing a new series of mechanical-type renewable fittings of improved and lightweight design developed to provide simple and inexpensive replacements. Folder contains detailed instructions for assembling renewable fittings to a length of metal hose, presented in step-by-step procedure.

H6—Beer-Beverage Coolers . . . A new catalog issued by Ideal Cooler Corp. illustrating and describing several new models of beer and beverage coolers. Among new models is an 8 ft. dry beverage cooler with 56-case capacity and a draft beer cooler with direct draw refrigerated faucets for instantaneous service, incorporating a refrigerated storage section.

H7—Portable Electric Tools . . . A new catalog (50A) issued by Portable Electric Tool, Inc., illustrating and describing the complete line of "Hi-Power" and "Zephyr" models of portable electric drills, hand saws, paint sprayers, paint brush cleaners, and drill kits. Gives complete specifications of tools and information on attachments and accessories that can be used with them.

H8—Recording Thermometers . . . A 44-page bulletin published by the Bristol Co. giving information on its "Series 500" line of thermometers. Liquid-filled, vapor pressure, and gas-filled types are described in models for recording, indicating, controlling and telemetering of temperatures. Operating principles, characteristics, etc., are described. Temperature chart records and application sketches are included.

H9—Air Pumps . . . How air pumps operate and where they are used effectively are outlined in Catalog 450 issued by Leiman Bros., Inc. New catalog contains performance curves and specification tables on their 4-wing type and 2-wing type air pumps and accessories. Pumps are of the rotary positive type, designed for producing vacuums up to 29" and pressures up to 25 psi.

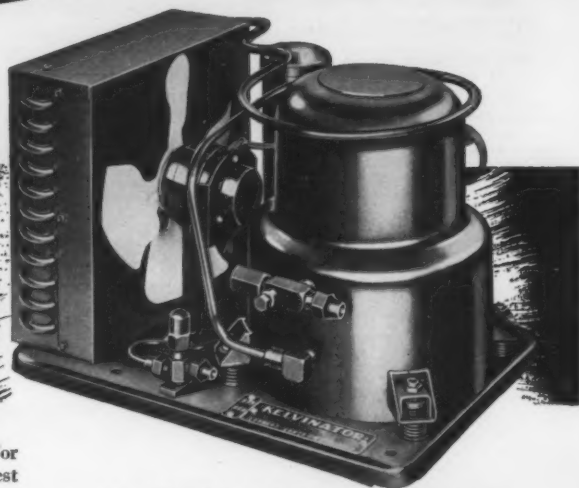
H10—Industrial Torches . . . A brochure on the Duo Flame line of quality industrial torches, manufactured by Duo Flame Corp. Particular attention is called to the exclusive "one-tip" patented feature, which makes the torches adaptable for brazing, hardening, pre-heating, etc., all with one tip. Torch is said to provide big needle flames or powerful blast flames, making tool adaptable to wide ranges of uses in refrigeration servicing work.

H11—Corrosion Prevention . . . A new bulletin (No. 93) issued by Metallizing Engineering Co., Inc. on the new Metco systems for corrosion prevention, a new technique designed to prevent rust on refrigeration equipment and other fabricated steel products. Metco systems provide pure zinc or aluminum coatings properly treated to withstand various corrosive conditions. The pure zinc or aluminum is applied directly to the steel base with standard metallizing equipment, and is then given a specific organic treatment depending on service requirements. Refrigerator cold plates are a typical job.

Customers Come Back For More . . .

when you're selling
Kelvinator!

10 New Hermetic Condensing Units

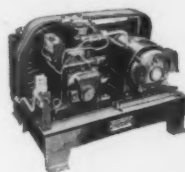


"Sold!" You can say that again . . . and again! For Kelvinator builds repeat business for you on the firmest basis of all . . . customer-satisfaction. Take Kelvinator's wide range of ten new, hermetic-type condensing units in sizes up to and including $\frac{1}{2}$ H.P. Each is precision-built, precision-tested to Kelvinator's exacting standards of accuracy. Each is competitively priced and bears the name users immediately associate with top quality.

Choose Kelvinator for your next job. You'll have the right condensing unit . . . and repeat business will

prove it. *All models available for immediate shipment.* Just call your nearest Kelvinator Distributor or Zone Office. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.

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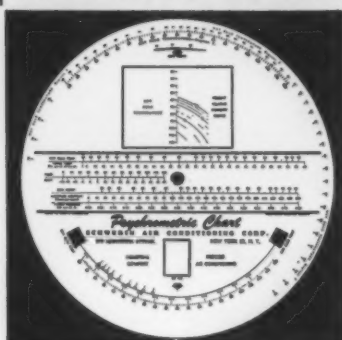


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This chart will instantly determine all properties of air within the air conditioning range (when any two are known). Packaged in a handy protective envelope, it will fit in any briefcase. An asset in office or field.

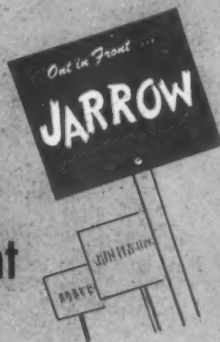
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NEW Products

For further information on any of these products, simply list on the postcard provided in this issue the key numbers of the items in which you are interested. Your requests will be forwarded directly to the companies concerned.

Ice Cube Maker • • PH-1
Product: Automatic ice cube maker.

Manufacturer: Loudon Mfg. & Sales, Inc., Minneapolis.

Features: Model L6930 has capacity of 200 lbs. of ice per day,

easy servicing, and can be equipped with separate direct-drive pump motors to meet special job requirements. Units are completely hot-dipped galvanized after fabrication for permanent rust resistance. Competitively priced, company says.



Alarm System • • • PH-3
Product: "Thermo-Alarm" plug-in warning system for refrigeration equipment.

Manufacturer: Mack Electric Devices, Inc., Wyncote, Pa.

Features: Alarm system comprises thermostat and alarm-buzzer unit. Plugs into any wall or floor receptacle, gives instant warning when temperatures go above safety point. Thermostat pre-set at factory to spe-

supplying 69 cubes every 30 minutes. Cubes are round, solid and without holes. Operating cycle is simple, ice being frozen in cups and then flushed down a chute to dry storage compartment during defrost cycle, after which freezing cycle is repeated. When storage bin is full thermostatic control shuts off machine. Cabinet is of 20 gauge Bonderized steel, inside finished in stainless steel. Storage bin interior stainless steel, 3" fiber glass insulation. Condensing unit is 1/2 hp hermetic. Dimensions of cabinet: 35" high, 24" wide, 38" long; will fit under bar.

Cooling Tower • • • PH-2
Product: Induced draft type cooling tower.

Manufacturer: United States Air Conditioning Corp., Minneapolis.

Features: Available in 3, 5, 7 1/2 and 10 capacity sizes. Towers are said to be unusually compact. Have a section permitting partial dismantling for ease in installation. Equipped with outside flange-type bearings for



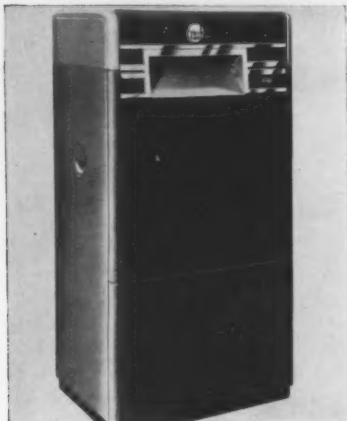
cific requirements of user. Applicable to frozen food cases, milk and beverage coolers, refrigerator cases, florist units, fur storage vaults, locker rooms, etc.

Flaked Ice Maker • • PH-4
Product: New Model DER-11 FlakIce machine.

Manufacturer: York Corp., York, Pa.

Features: Incorporates "de-aerated ice" feature designed to make ice clearer, eliminate whitish cast re-

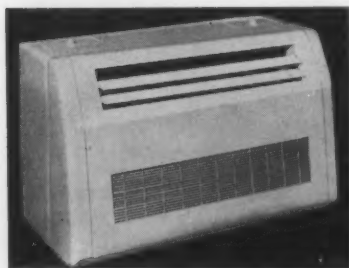
sulting from presence of air in ice ribbons. Capacity is 1 ton a day of curve shaped ice ribbons for cooling liquids, icing vegetables, salads, des-



serts, seafoods, etc. Cabinet of DER-11 is Bonderized steel finished in baked wrinkle taupe and glossy brown; side panels removable; takes up 23" x 32" space. Condensing unit spring mounted and flexible refrigerant and water connections for quiet operation; F-22 refrigerant used. Ice frozen on polished stainless steel revolving drum, outer shell of which is shrunk on spiral machined passage which forms refrigerant evaporator. Water sprayed on drum as it revolves; ice is loosened by stainless steel cutter blades, flows down chute to storage bin. Machine has several automatic protective devices, is approved by Underwriters' Laboratories.

Air Conditioning Line • PH-5
Product: "Cool-a-Matic" line of air conditioning products.

Manufacturer: Automatic Firing Corp., St. Louis.



Features: Line comprises window type room unit and packaged air conditioner. Room unit being manufactured in 1/2 and 3/4 ton capacities, packaged units in 3, 5 and 7 1/2 ton

capacities. New models said to incorporate new compressor system, new condenser unit, other refinements which increase cooling output and lower electric current consumption.

Company also makes "Fridg-A-Fire," a twin-unit heater-cooler furnace that cools by refrigerated air in summer and provides air conditioned gas heat in winter; "Gas-A-Fire", "Dual-A-Fire" and "Oil-A-Fire" furnaces, and "Stok-A-Fire" stokers.

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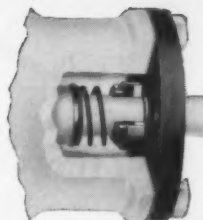
Carbonator Equipment • PH-6
Products: New line of carbonator and cooler-carbonator assemblies.

Manufacturer: Temprite Products Corp., Detroit.

Features: 1950 line features newly designed and improved pump, motor and relay assembly, incorporates other improvements in functional parts of basic carbonator. Vane-type, direct-connected pump is self-lubricating and has built-in by-pass pressure relief valve, claimed to eliminate danger of "burned out" pump in case of temporary water supply failure

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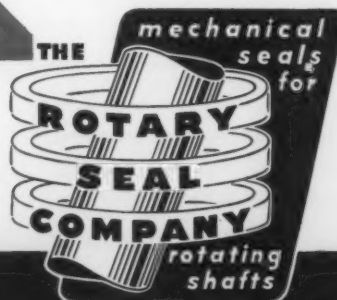
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and to reduce maintenance. New relay assembly was developed for long, trouble-free carbonator operation, using high-tensile rustless alloy on contact arms. All former carbonator styles have been retained, including plain carbonator, cooler-carbonators, and packaged carbonator units. Design of pump assembly and relay controls permits installation remote from carbonator when desirable. New schedule of model numbers, list prices available in Catalog No. T-315.

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

Room Air Conditioners • PH-7
Product: New line of "Leader" models of room air conditioners.

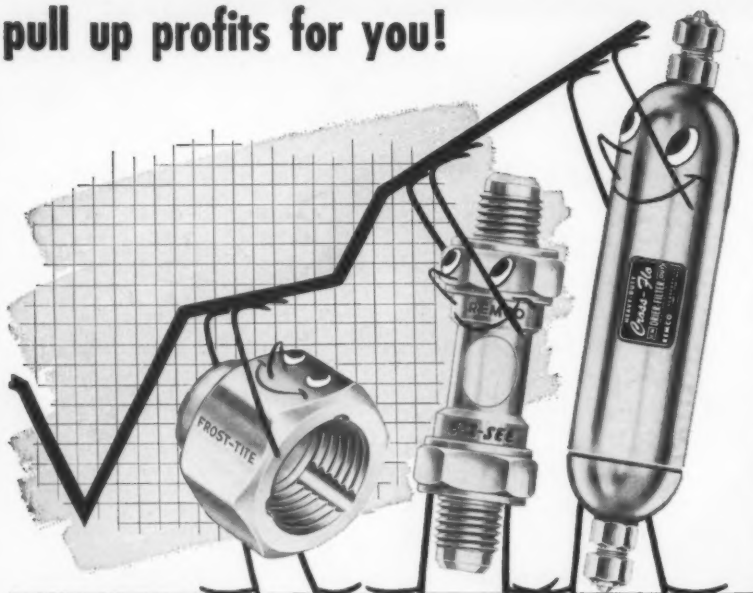
Manufacturer: Remington Air Conditioning Div., Cortland, N. Y.

Features: Air conditioners are of console type, applicable for group offices, laboratories, small shops, blueprint and tool rooms, etc. Also applicable where special custom-built enclosures are desirable because of decorative scheme, or where conditioner is remotely installed from conditioned space. Discharge and return grilles adjustable or removable; evaporator fans are direct motor driven.

Models available with manual or automatic control of cooling, and as year-round units with heating as well as cooling. Four models, two air-



Let the **REMCO** "loss eliminators"
pull up profits for you!



FROST-TITE eliminates losses from loosened and cracked flare nuts —

In Frost-Tite flare nuts, forged frost-relief slots provide relief for expanding ice within the nut, and thus no force is created to cause loosening, splitting, or cracking. Cost no more than ordinary flare nuts—are ideal for use anywhere in the system.

E-Z-SEE eliminates losses from leaking liquid indicators —

With E-Z-See, you are assured of the following definite advantages: (1) E-Z to see thru—both sides of the body are open to let in light (2) Positively leakproof—can't leak because springs automatically maintain just the right force to form a positive seal around the glass (3) Perfectly Safe—glass is protected for safety at pressures up to 500 psi.

Cross-Fla eliminates losses from clogged driers and expansion valve freeze-ups —

Now with Molded DuCal Drierite as the drying agent, you get the highest-possible efficiency even at liquid temperatures up to 150°. You can now count on prevention of refrigerant control freeze-ups even in the lowest temperature installations.

Be sure to specify REMCO "Standard-Duty" Driers as the ideal low-cost quality driers for field applications and original equipment. Available with Molded DuCal Drierite or Silica Gel.

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cooled, two water-cooled; Btu ratings from 11,600 for C10 air-cooled to 17,000 for C12W water cooled. Prices from \$565 for C10 to \$808.50 for C12W. Cabinets are all 34½" wide x 19½" deep x 37¼" high.

Cooling Towers • • • PH-8
Product: New Series "P" and Series "SRF" cooling towers.

Manufacturer: J. F. Pritchard & Co., Kansas City, Mo.

Features: Series "P" towers are of packaged design, for heavy duty air conditioning, refrigeration, jacket water and other installations. Deck filling and drift eliminators made of high quality California redwood; heavy structural framework used for



supporting all parts of tower; high efficiency propeller fan mounted directly on motor shaft; basins equipped with automatic float valve for maintaining correct operating water level. Series "SRF" towers (illustrated) are especially suited to air conditioning installations, range in capacities up to 24.5 tons refrigera-

tion; have pre-cut Redwood louver boards with "slip-fit" design for easy access to interior; louver posts accurately slotted for louver boards; heavy Redwood top framing to give structural strength at top of tower; steel pipe distribution system including header, arms and bronze hollow-cone spray nozzles. Floor of 8" high basin is steel sheet, accessories include ball-operated float valve and screened suction connection.

Door-Light Unit • • PH-9

Product: "Display All" refrigerator display door and vertical fluorescent light combination.

Manufacturer: A. H. Witt Co., Los Angeles, Calif.

Features: Thermopane glass doors

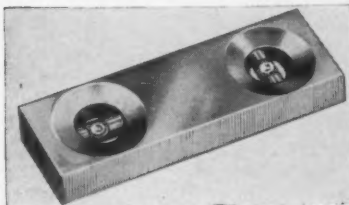


are constructed so as to insure positive closure of reach-in space when not in operation. Special locking arrangement activated by fingertip pressure also prevents doors from popping open when walk-in door is in operation. Doors equipped with double seal and supported by non-sagging heavy duty hinge. Combination is completed by vertical tubular light installed behind door mullion. Light is 48-inch, 40-watt light encased in heavy white lucite vacuum tube.

Cross Test Level • • PH-10

Product: Cross test level for use in leveling condenser coil assemblies.

Manufacturer: Bacharach Industrial Instrument Co., Pittsburgh.



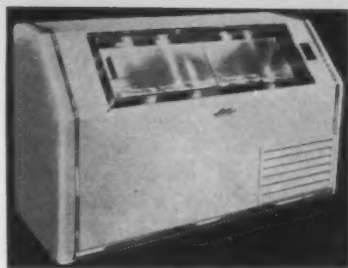
Features: Tool is compact, measuring 4" long x 1 1/4" wide x 1/2" high; sensitivity is such that 1/2° out

of level moves the bubbles 1/8". Cross level design makes possible leveling in both directions without moving the tool. Level glasses are set in round openings with beveled rims to provide visibility from all angles. Block is aluminum with bottom surface carefully finished. Bulletin 501 gives complete details.

Frozen Food Case • • PH-11

Product: New "angle-vision" frozen food merchandiser cabinet.

Manufacturer: Fogel Refrigerator



Co., Philadelphia.

Features: Especially designed for use in stores with limited floor space.

NATIONAL LOCK the finest name in distinctive Refrigerator Hardware

Proven Best For All These Commercial and Domestic Uses

BACK BARS • MILK COOLERS • FLORIST BOXES • LOW TEMPERATURE HORIZONTAL OR VERTICAL CABINETS • DISPLAY CASES • STOKERS • REACH-IN CABINETS • COIN-OPERATED REFRIGERATED DISPENSING MACHINES • DRAFT BEER EQUIPMENT • BOTTLED BEVERAGE COOLERS • MANY OTHER TYPES OF REFRIGERATING EQUIPMENT

NATIONAL LOCK COMPANY

Rockford, Illinois Refrigerator Hardware Division

59-209

59-204

59-215

59-213

59-224

59-8428

59-8143

59-8128

59-206

59-8426

59-5825

Case serves dual purpose of frozen food merchandiser and also of display or check-out counter, providing double normal merchandising space. Case comes in 6 and 8 feet lengths, is 28" wide, and has a broad interior mirror and interior fluorescent lighting. Case is serviced from the front. Condensing unit carries 5-year warranty.

Hose Assemblies • • PH-12

Product: Flexible, non-metallic hose assemblies.

Manufacturer: Resistoflex Corp.,

Belleville, N. J.

Features: Assemblies with $\frac{1}{2}$, $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{5}{8}$ -in. inside diameters are approved by Underwriters' Laboratories for factory installations in Class E systems where F-12 or F-22 is used as refrigerant. Manufacturer recommends these assemblies not only where vibration is experienced but also where refrigerant lines are subjected to continual flexing. Because of compar refrigerant tube, which is reinforced by carcass of integrally bonded braids and a synthetic cover, manufacturer claims assemblies are

impervious not only to Freons but also to methyl chloride, and are unaffected by compressor oil within system. Lines being offered as complete assemblies with gas-tight fittings.

Psychrometric Chart • PH-13

Product: Automatic calculating psychrometric chart.

Manufacturer: Schwerin Air Conditioning Corp., New York City.

Features: Direct-reading circular chart measures 9" in diameter and is designed to determine accurately and rapidly all properties of air when only two properties are known. Front of chart has graduations in wet-bulb temperature, dry-bulb temperature, dew-point, specific volume, and scales to determine moisture content in gal. per pound, vapor pressure in pounds per sq. in, total heat in Btu per pound of dry air. On reverse side is standard psychrometric chart and explanation of how to use it.

Frozen Food Cabinets • PH-14

Product: Frozen food display cabinets.

Manufacturer: Coolerator Co., Duluth, Minn.

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WITH THE

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- Easy
- Low Cost
- A Real Sales Builder

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Model DM6

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METERS ARE

—Low in price!

—Simple to install!

—Fully guaranteed!



Features: Three models in line; FC-100 Space-Saver (10.3 cu. ft.) lift-top unit, FL-160 E-Z-Selector (18.13 cu. ft.) lift-top unit, and FG-162 Displayer (15.76 cu. ft.) glass-top unit. Models are in popular price class, designed to appeal especially to smaller stores where investment in equipment has been stumbling block to sales. FC-100 takes up 4'7" space, provides 6½ sq. ft. visual display, has capacity of 304 food packages or 47 doz. 6 oz. cans of frozen juices. FL-160 gives 8½ sq. ft. display area, holds 515 frozen food packages. FG-162 has two Thermopane glass sliding

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lids, one-piece rubber capping around cabinet top. Hermetic units in all models, 1/4 hp in FC-100, 1/2 hp in others. Freon-22 refrigerant. Prices: FC-100, \$349.50; FL-160, \$479.50; FG-162, \$529.50.

Evaporative Condensers • PH-15

Product: Evaporative condensers.
Manufacturer: McQuay, Inc., Minneapolis.

Features: Condensers presently available in three sizes—3 1/2, 6 and



complete view of contents. Especially suited for stores desiring storage

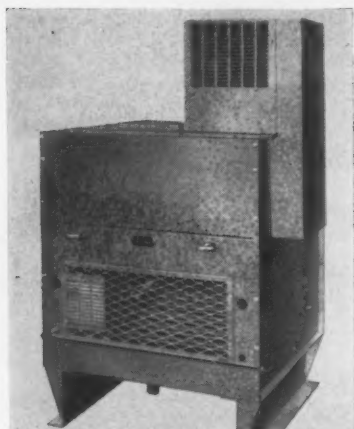
space as well as display. Capacity 820 frozen food packages, 930 square ice cream packages. Dimensions 62 3/4" x 30 1/4" x 80 1/4".

Hand Torch • • • PH-17

Product: "Prepo" hand torch for soldering and other uses.

National Sales Agent: Bell & Gossett Co., Chicago.

Features: Torch uses new fuel, "Prepo" compounded of petroleum hydrocarbons and packaged in a dis-



12-ton units, with larger sizes planned. Units have copper coils, with all primary surface. Units designed for floor mounting, but can be adapted for ceiling suspension and for outdoor installations. Size is compact to allow easy handling and moving through small doors; front panels removable for servicing; refrigerant and electrical connections come out of front for quick accessibility; low air velocities over surface make eliminators unnecessary, it is claimed. Company plans addition of cooling tower line also, it states.

Frozen Food Case • PH-16

Product: Model ROGF frozen food display cabinet.

Manufacturer: Ace Cabinet Corp., New Bedford, Mass.

Features: Designed for stores requiring large display cabinet. Unit is combination low temperature remote model with storage compartment in cabinet base. Made of one-piece all-welded steel with heavy gauge exterior. Five full-color three-dimensional photographs set in superstructure. Food compartment has open top and glass-enclosed front for



Simplify Your Construction Methods with Engineered KOLD-HOLD Liners

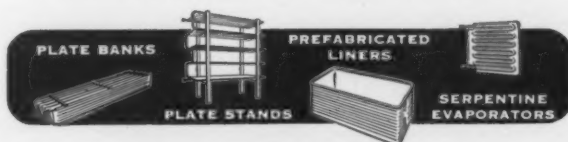
You save hours of valuable construction time and build extra efficiency into refrigeration equipment, by using prefabricated Kold-Hold Liners. These Liners quickly slip into place to provide adequate refrigeration for the sharp freezing, cooling and holding of all types of foods and perishable products. The inner surface is smooth and sanitary — no other linings required.

There are no refrigeration joints to become damaged with the complete cabinet liner. Liners are fabricated from Serpentine Plate Evaporators

without interfering with the Serpentine principle of refrigerant flow. Therefore, they retain all the advantages and proven dependability of Serpentine construction.

Kold-Hold Prefabricated Units save time and money for the manufacturer, service engineer and user. They increase efficiency and reduce the cost of both domestic and commercial refrigeration equipment. They simplify conversion of obsolete equipment to meet today's standards of efficiency and dependability.

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KOLD-HOLD MANUFACTURING CO., 503 E. Hazel St., Lansing 4, Mich.



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REFRIGERATED DISPLAY TABLE

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The latest Tyler FIRST offers shopping from all 4 sides — wide open self-service! Complete, ready to use — small floor space! For all types of food stores, restaurants, hotels, taverns, florist and bakery shops, candy stores, etc. Write today. Tyler Fixture Corporation, Dept. RI-8, Niles, Michigan.

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The INSTANT ICE MACHINE, featuring the new "FRACTURMATIC" principle of operation, is the most revolutionary new development in the Ice and Refrigeration industry. "INSTANT ICE" is the modern way to make ice flakes... so economical it soon pays for itself with savings on ice bills.

Simplicity of design and ruggedness of construction are combined to produce top efficiency in performance and a long life of economical service. In the INSTANT ICE MACHINE, refrigerant seals, which are required on other machines employing a rotating evaporator, have been completely eliminated. This and other patented* features make the INSTANT ICE MACHINE outstanding among ice-making machines.

Users everywhere are enthusiastic about the time and money-saving advantages of making ice the "INSTANT ICE" way.

Find out now, how you can cash in on this new, fast growing industry. A few territories still available.

For full information, fill out and mail the coupon below, today.

* Patents applied for

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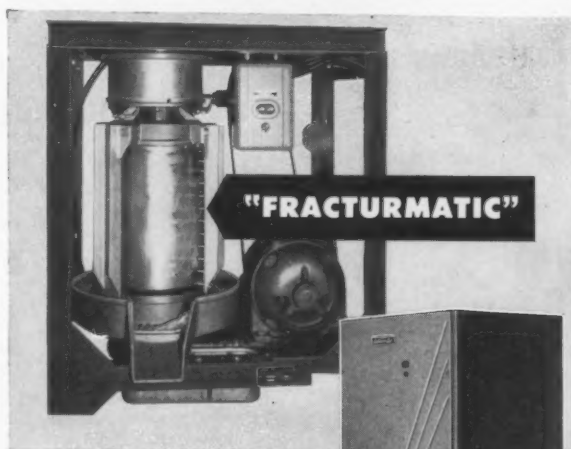
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FREEZES...EXPANDS...FRACTURES...LIFTS
— the new "FRACTURMATIC" principle of operation utilizes one of the most powerful forces of nature, a force which nature, down through the ages, has used to open great fissures in the earth, move mountains, and in fact to change the whole topographical structure of the world. Now this great force, *expansion*, has been put to work in the INSTANT ICE MACHINE to produce cold, hard ice flakes at amazingly low cost per ton.



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posable container. Container, size of ordinary beer can, is quickly sealed into position as fuel tank of torch. Does away with all pouring, pumping, priming characteristics of ordi-



nary blow torch; fuel lights with match, is self-pressurizing at normal temperatures. Torch comes with two interchangeable burning tips—one throwing long, broad flame, the other long pin-point flame (for soldering, etc.) Weighs 1½ lbs., fits easily into mechanic's tool box. Fuel is non-toxic, non-poisonous. Appliances being developed for using the new fuel include a refrigerant leak detector, a soldering iron, etc.

Year-Round Conditioner PH-18

Product: Model 38B Weather-maker packaged summer cooling and winter heating air conditioning unit.

Manufacturer: Carrier Corp., Syracuse, N. Y.



Features: Unit is 52" wide x 43" deep x 70" high overall, and is applicable both to new structures and to

replacement on existing duct systems. Combination furnishes automatic gas heating in winter and summer cooling by hermetically sealed refrigeration unit. Offered in three capacities: 3 hp cooling and 110,000-150,000 Btu heating; 5 hp cooling and 110,000-150,000 Btu heating; and 5 hp cooling and 165,000-200,000 Btu heating. Equipment enclosed in single cabinet, thermally and sound insulated. Unit is serviceable from front, and so equipped that return air can be drawn into it from bottom. Single thermostat control with sim-

ple changeover from summer to winter operation.

TWO NEW MEMBERS OF DETROIT ASSOCIATION

Two new firms recently have become members of the Refrigeration Contractors Association of Detroit. They are: Buch Mfg. Supply Co., 509 Mt. Elliott, and Werner Electric Co., 3020 Trumbull.

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Know the "Serviceman" line of testing equipment

1 The "Serviceman" Testing Thermometers



Standard Serviceman



4-scale Serviceman



Tubing in case

Thousands of these Serviceman dial thermometers in use prove they're the best ever. You simply pull out the five foot length of armored tubing from the back of the case (see cut), then run the bulb to the point of measurement. Readings are made as they should be: with door closed.

The standard type (available in ranges of -10° F. to +100° F. or -30° F. to +65° F.) is shown above; also the new four-scale type available in the same temperature ranges. Four-scale type has pressure-equivalent scales for Freon, sulphur dioxide and methyl chloride, each scale in a separate color. The exclusive Marsh Recalibrator enables you to keep these instruments on the beam at all times.

And don't overlook that handy little pocket thermometer, opposite ... highly accurate; easy to read; furnished with swivel clip to hang it in refrigerator or clip it in your pocket.



Pocket thermometer

2 The "Serviceman" Testing Gauges



Testing gauge set

Something new, something far better ... that is the story of these extremely accurate testing gauges. They are dressed in handsome polished brass cases with glass crystal and knurled screwed ring which gives quick access to the "Recalibrator" to keep them always accurate. Retard scale on 30" x 200 lb. compound gauge gives close reading in important testing range. Both the compound and the 0-300 lb. pressure gauge have knife edge pointers for use on manifolds and other testing operations. Note also the four-



4-scale testing gauge

scale corresponding temperature gauge, opposite, with three extra color-differentiated scales covering sulphur dioxide, methyl chloride and Freon. Made in ranges for all requirements. All testing gauges have 2½" dials.

See your jobber about Marsh Testing Instruments, or write for facts.

MARSH INSTRUMENT CO. Sales affiliate of Jas. P. Marsh Corp., Dept. P, Skokie, Ill.

MARSH Refrigeration Instruments

A GOOD INVESTMENT . . .

Continued from page 34

also the president's offices. In the chief executive office, air is conditioned by a floor-type self-contained room unit, a prior installation. A ½ hp window-type air conditioner serves the adjoining secretarial office.

Located in a corner position on the second floor and with two outside walls is the bookkeeping department. This area is L-shaped and is comprised of two open sections. The

largest is about 45 feet long and 20 feet wide and the other is 24 feet long and 16 feet wide. A single 3 hp air conditioner serves the entire area. The air distribution hood of this conditioner has been removed and the air is discharged into two ducts which follow the outside building walls at ceiling height, distributing fresh cool air to all parts of the area.

Another ½ hp window-type room air conditioner is installed in the credit checking section of the personal credit department. This office had dimensions of approximately 20 by

20 feet with four persons working regularly in the room. Like the bookkeeping department, this office is located directly under the roof. Moreover, it has an outside wall and window exposed to the afternoon sun. However, the small compact conditioner has plenty of capacity to keep the room comfortably cool.

One of Frigidaire's new electric dehumidifiers has been put to use in the money and security locker vault, on the main banking floor, where it is used to protect precious documents against moisture. For many years, excessive humidity common to the Bronxville locality created a serious problem for the bank. Ralph G. Wills, vice president, explained that an old-style system was employed in the vault without much luck. "The new electric dehumidifier brought about a 100% improvement," he declared. "It removes up to a gallon of water from the air in the vault each day."

According to Bronxville Trust officials, their package air conditioning system has brought about a number of benefits for their business. Prior to installing the equipment it was not uncommon to close the bank early in the afternoon because of heat. Now, business goes on as usual without any discomforts to patrons or employees. They have found that patrons are more relaxed in the air conditioned interior and spend more time doing business. Employee absenteeism has been held to a minimum with no common summer ailments or colds reported. Moreover, bank officials claim that they did not experience the usual summer slump in efficiency of employees due to vacation schedules and such. In addition, they are finding that the bank's prestige has taken a definite step forward since installation of air conditioning equipment.

Prest-O-Lite HALIDE

Trade-Mark

Leak Detector



Quick—Always ready for use. Lights instantly. Locates exact source of leak in a few seconds. Avoids waste of refrigerant gas and costly shut-downs of equipment. An indispensable test unit for service and installation kits.

Sure—Reacts instantly to smallest concentrations of any of the non-combustible halide refrigerant gases (F-11, F-12, F-21, F-113, F-114, Carrene) commonly used in domestic or industrial systems.

Simple—Small, light, and handy. Easy to use anywhere. Durably built and dependable. No delicate parts to get out of order.

• For more details, see your jobber or write The Linde Air Products Company, 30 E. 42nd St., New York 17, N. Y. In Canada: Dominion Oxygen Company, Limited, Toronto.

"Prest-O-Lite" is a trade-mark of The Linde Air Products Company, a Unit of Union Carbide and Carbon Corporation.

Order from your local Jobber

WALK-INS • ICE CUBE MAKERS • REACH-INS

FREEZERS



a bottle cooler that means business...



DRY KOOL BOTTLE COOLER

A proven profit-maker available in BROWN DULUX or STAINLESS STEEL in 4', 6', 8' and 10' lengths—removes or plug-in. United's original forced air system insures maximum air circulation and faster cooling with large capacity blowers under each door and coils that are up and out of the way.

- ✓ Streamline heavily insulated all steel cabinets.
- ✓ Stainless steel Lift-A-Way doors with roller bearings—"No busted fingers."
- ✓ Flush bottle decappers.
- ✓ More capacity per cubic foot.

SELL UNITED AND YOU SELL THE FINEST

DIRECT DRAW SYSTEMS • BOTTLE COOLERS



"PAINLESS" PAY-OFFS . . .

Continued from page 41

their percentage of repossessions on meter plan sales, 75%, or 203, of the dealers reporting said they had no repossessions on this type of business. Thirteen firms reported that their percentage of repossessions was less than 1% of units sold; 17 said their repossessions ranged from 1% to 2%, 18 reported repossessions at from 3% to 5%, and in the case of nine dealers the figure was 6% or more.

Commenting on this section of the survey, a Detroit dealer said that meter selling "has been the answer to some of our critical credit problems", and a dealer in Salt Lake City reported that his firm had used meters successfully to collect money long overdue on service work.

Consistent local advertising was credited by a number of dealers with helping them in their meter plan merchandising last year. Thirty-six per cent of the dealers used one or more media to advertise the plan; 40% of those advertising used direct mail; 38% used more than one media. By number, replies to this section of the survey were: Direct mail, 34; newspaper, 17; radio, 2; more than one media, 32.

As a final section of the survey, reporting dealers were asked to forecast their sales for 1950. Fifty-two per cent (289 dealers) estimated that their volume would be greater than in 1949; 42% (236 dealers) estimated that sales would be about the same as that year; and 6% (33 dealers) expected sales to be less.

Pointing up the possibilities of using coin meters to sell related equipment items in addition to refrigeration, a dealer in Salt Lake City reported that "after installing the meter for refrigeration, it is easy for the customer to buy a slicer, scale, or other equipment simply by changing gears and increasing payment". And a dealer in Erie, Pa., who said he has been using meters since 1936, said "we use them for new sales, also to get delinquent accounts, sold on other payment plans, into shape. Every meter we have put out has been left for the customer's use after he has paid for the purchase".

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

We've Got a...

FULL HOUSE!

**EVERYTHING FOR THE COMMERCIAL OR INDUSTRIAL
ELECTRIC REPAIR SHOP!**

**WRITE FOR FREE, 238 PAGE ILLUSTRATED CATALOGUE
(On Your Letterhead, Please)**

COMPLETE - READING ELECTRIC CO., INC.
106 S. JEFFERSON ST., CHICAGO 6, ILL. TELEPHONE: CENTRAL 6-5390

"Your Best Source of Supply"

Make your operation more efficient...more economical...more profitable with

TECHNIFLEX REFRIGERATOR DOOR GASKETS

the most complete line of
replacements
gaskets

A door gasket for almost every household refrigerator. Made of natural rubber to meet the most rigid specifications of nationally known appliance manufacturers. Non-staining, odorless, non toxic, oil resistant, weather and tear resistant for long life.

Discuss your refrigerator replacement problems with us. Let us show you why "quality and Techniflex" mean the same thing. When your profits depend on quality...it pays to depend on Techniflex.

ask for complete
illustrated catalog

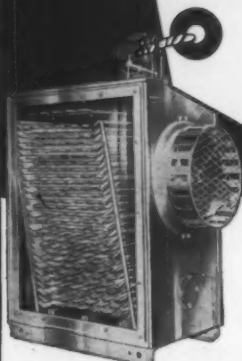


**TECHNIFLEX
DOOR GASKET NOTCHERS**
Take the guesswork out of gasket installations. Lightweight. Easily operated. Tempered steel blades are easily replaced. Two styles for cutting 90° and radius corners.

TECHNIFLEX

DEPT. 56, PORT JERVIS, N. Y.

MARLEY AQUATOWER IMMEDIATE SHIPMENT



Cut-Away View Shown Above

Write for Bulletin AQ-50

* Attractive Proposition for
Volume Buyers

Dept. CR-8

PACKAGED 3 TO 50 TON COOLING TOWERS

Check these exclusive features.

- ✓ Interior coated with rubber.
- ✓ Deep pitch—slow speed—quiet fan.
- ✓ Heart redwood filling—top to bottom.
- ✓ Weather-proof motor—adjustable base.
- ✓ Open distribution—no nozzles to clog.
- ✓ For indoor or outdoor installation.
- ✓ Completely assembled—ready-to-go.
- ✓ Sized to serve packaged air conditioners.
- ✓ Guaranteed performance.
- ✓ Complete operating instructions.
- ✓ Stocked in many principal cities.

THE MARLEY COMPANY, INC.
KANSAS CITY 15, KANSAS



SELL THE LINE THEY REALLY GO FOR



Lipman
REFRIGERATION and
AIR CONDITIONING

Get a complete line . . . get Lipman . . . includes water, air, and combination Refrigeration Units . . . **PLUS** the finest Air Conditioning Equipment! Lipman gives you a full sales kit . . . products to meet every sale! Mail coupon today!

General Refrigeration Division
YATES AMERICAN MACHINE CO.
Beloit, Wisconsin

Gentlemen: I am interested in making money selling air conditioning . . . the Easy Lipman way. Send details.

Company Name _____

Address _____

City _____ State _____

Individual Name _____

Title _____

*Write for
MERCHANDISING
Plan!*

MORE THAN HE PAYS FOR . . .

Continued from page 31

difference in capacity, of course, is that in the bottle box the bottles can be corded, instead of being stored upright.

All of this equipment in our "average" tavern would be refrigerated by a single $\frac{3}{4}$ -hp machine.

Temperature control is the most important factor in installations of this type. A single constant pressure valve on the supply line simply will not do the job properly. For this reason we install a constant pressure valve for each evaporator in order to ensure proper control.

Air conditioning is becoming an increasingly important part of tavern installations, especially in those establishments where food is served. I don't think the time is far off when the pressure of competition will force practically every tavern to consider the installation of some type of comfort cooling.

By far the largest part of our tavern selling is handled through personal contact.

Customer referral, or the old "use the user" approach, still is far and away the most important single influence in selling tavern installations, however. In fact the great majority of our jobs result from calls which come to us, rather than from calls which we make.

We find selling tavern refrigeration equipment a peculiarly paradoxical business. We want to put in the very best installation we know how—one which will dispense the customer's beer exactly as it should be served. On the other hand, we know from our own experience that a \$5 difference in the price of the job looks a lot more important to the average tavern operator than a degree or two of temperature control. All our selling is aimed at effecting the best possible compromise between these two divergent points of view.

F. S. CARPENTER HEADS U. S. RUBBER EXPORT

Frederick S. Carpenter has been elected vice president of United States Rubber Export Co., Ltd. In that capacity he will continue in charge of foreign manufacture and will also be responsible for the management development program of the export company.

OPEN FOR DANCING . . .

Continued from page 43

its own two-step thermostat, enabling it to adjust itself for varying heat loads. A "Humitrol" adjustment on each unit permits it to dehumidify on muggy nights, when the crowd is not large and the requirement for cooling proper is not as high as at other times.

All fresh air necessary for operation of the system is introduced through the two units located at the south end of the ballroom area, utilizing what were originally two of four window spaces in the building.

All water lines and electrical connections on the four units installed in the main ballroom area are concealed behind decorative lighting panels at either end of the ballroom, making the entire installation a pleasing one to patrons. The fact that the control panels of the package-type units light up when they are in operation adds, rather than detracts, to the appearance features of the units.

Ducts on One Unit

The fifth package-type unit, which (as previously stated) is located above and at the front of the main dancing area, has four outlets which discharge air into the main dancing area, each of these outlets being of 750 cfm capacity. Six additional "Agitaire" units, each of 500 cfm capacity, serve the low-ceiling area where the dancers gather between dance-sets, and where the check rooms and mens' and womens' rest rooms are located. A separate duct, with capacity of 115 cfm, channels conditioned air to the manager's office, located in back of one of the check rooms. Rest rooms and check rooms themselves are not air conditioned.

Return air to this unit is supplied through a duct in the sloping ceiling located at the front of the main dancing area.

Advantages of the installation of package-type air conditioners, from the standpoint of the ballroom operator, are:

Cost of the installation, including plumbing, piping and electrical work, is lower than that of a central-plant type system. In fact, from actual quotations, the saving, to the operator, is between 35 and 40% as compared to that for a central-plant type system.

Zone temperature control, allowable through the package-type installation, is ideal for an application of this type, where heat loads are apt to vary widely.

In the case of an installation in an older building, lower installation costs are important. Also, due to the two-step control on each of the package-type units, the operating costs of the system are lower than would be the case with a central-type system. Even with large crowds, the system, as installed, operates at less than full capacity.

An important adjunct to the system is a natural-draft cooling tower located on the roof of the building. This is also an operating-cost reducer, since it lowers costs of water for running the cooling system. Actual water loss is only about 5%, due to evaporation.

With its new air conditioning system, the management of the Aragon has set out, through aggressive promotion, to make what has formerly been a dull season into its best time of the year—from an operations and profits standpoint. As far as the

THE *Streamline* DELUXE DRIER

"CLEANS AS IT DRIES"

A REFRIGERATION SYSTEM!"

6. "IN-LINE" Cleaners Safeguard Vital Working Parts of The Equipment!



- 1 INLET CONTAINER SCREEN—Positive Desiccant Retainer without pressure drop.
- 2 DRYING AGENT—Installed under strict laboratory control with sealed charging equipment.
- 3 LOCKED-IN CONE OUTLET SCREEN—Extra Capacity free flow strainer surface.
- 4 FILTER BED—Chemically cleaned wool mass traps fine metallic grit and sludge.
- 5 WHITE WOOL DISC—Doubles filtering capacity.
- 6 OUTLET RETAINER SCREEN—By itself, equal to the filter elements in most ordinary driers.

For over 10 years the STREAMLINE Deluxe Drier has proved its ability to thoroughly clean and dry a refrigeration system. This "Double-Duty" Drier, with its unique cone screen filtering unit, is designed to remove metallic filings, lint, sludge and grit as well as doing a "one pass" job of removing all harmful moisture. Forged brass ends are threaded and soldered to the heavy copper shell for extra strength and safety.

Packaged in individual and multiple cartons for double protection of your investment. Keeps parts clean and safe from damage from the factory to the job.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

ORDER A CARTON TODAY
from your refrigeration wholesaler

**CEE-KLEER
SELLS YOU
To Your Customers**



Make trouble visible with the only liquid indicator that fully indicates

FULL 360° VISION MAKING POSSIBLE A RAPID DIAGNOSIS OF OPERATING TROUBLES

ENGINEERED
By Service Men
For Service Men

PROVIDES
Positive indication of excess oil in the system



CEE-KLEER
Sight Driers are 100% cleanable and refillable.
A combination: Sight Drier-Strainer-Filter
ALL IN ONE

Makes servicing easier
Faster—Eliminates guess-work.

BUILT "NOT TO LEAK"

Contact your jobber or write direct for free descriptive literature.

CEE-KLEER PRODUCTS CO.
1335 Walnut St., Cincinnati 10, O.

Do you have a
VIBRATION problem?



Solve it quickly and easily—Install Packless Seamless Bronze Vibration Absorbers—available to fit copper tubing in sizes from 1/4" O.D. to 10 1/4" O.D.



• Write for literature or see your local distributor

PACKLESS

METAL PRODUCTS CORPORATION
DEPT. CR - 31 WINTHROP AVE.
NEW ROCHELLE - NEW YORK

management is concerned, the addition of air conditioning puts one more "season" onto the ballroom's usual year—and the management is out to make the most of it.

In large-size newspaper space, the management of the Aragon is featuring it as "Ohio's First Air Conditioned Ballroom", and urging patrons to "Dance—Relax—Beat the Heat". Throughout the summer, dancing is every Wednesday, Saturday and Sunday at the Aragon.

The management also is promoting the idea, among Cleveland business organizations, of holding dancing parties there during the summer months, as a good will builder. The same theme is being pushed among clubs and other social organizations.

It was a long, hard pull, but air conditioning finally made the grade here . . . and, to all appearances, has opened up a new field to other alert air conditioning contractors who have prospects in their own territories who are faced with similar cost problems—and whose profit opportunities, properly dealt with, are equally good.

**GEORGIA COOLING DEALER
OPENS NEW BRANCHES**

In order to capitalize on the potential for air conditioning in southeast Georgia and northern Florida, Mingledorff's, Inc., air conditioning dealer of Savannah, Ga., has acquired additional franchise territory and is opening branches in Brunswick, Albany, and Tallahassee, according to W. Lee Mingledorff, president.

The new branches are in addition to the one at Augusta which has been in operation since 1945. The company also has a number of associate dealers and operates mobile service shops to cover the smaller communities.

**DISTRIBUTES MITCHELL
IN CAROLINAS**

Twin States Distributing Co., Charlotte, N. C., has been appointed distributor in the Carolinas for Mitchell room air conditioners.

According to Z. F. Curtis, Jr., Twin States sales manager, some dealer franchises are still available.

**BUY FROM YOUR
REFRIGERATION WHOLESALER**

**Paragon
CHRONO-SPRAY
FAIL-SAFE TIME CONTROLS**
for water-spray
defrosting



SERIES MG-3

**for Locker Plants, Big Unit
Coolers, Walk-in Boxes, Air Con-
ditioning, Breweries, Dairies, etc.**

Provides three adjustable periods: delay, water spray, and drain. "Fail safe" feature prevents evaporator fans from running during water spray cycle when unit is being defrosted.

See your jobber or write for free bulletins and installation data.

Paragon ELECTRIC COMPANY

1688 TWELFTH STREET
TWO RIVERS, WISCONSIN

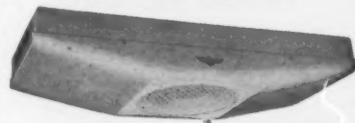
America's Foremost exclusive manufacturer of Time Control Switches for all uses, including "de-frost-it" for domestic refrigerators, only



\$9.95

LOOK to LARKIN

for Low Prices



LARKIN CEILING HUMI-TEMP

Price is only one factor in the selection of any product—especially one that has so important a task as protecting valuable perishables. Performance must come first. Quality cannot be overlooked. Durability is highly important. Larkin has all of these. And Larkin has low prices, too. Compare them and see for yourself how low they really are.

For the latest Larkin price list, see your wholesaler. If you wish, write direct to us and we shall be glad to send you one.

Manufacturers of the original Cross-Fin Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS

519 MEMORIAL DR. S.E. • ATLANTA, GA.

GOOD HOUSEKEEPING PAYS OFF



When you want a certain manufacturer's catalog or other piece of literature, how many piles of miscellaneous material on your desk do you have to dig through to find it? Or how many times have you suddenly remembered that you just gave away your last copy of it, only yesterday? To solve this problem, M. F. "Marty" Reno, manager of the F. H. Langsenkamp refrigeration supplies store in Indianapolis, Ind., had a simple compartmented rack erected right back of his desk. Here he neatly files in its own carefully labeled cubbyhole the literature for each line of products which the store handles. "This sort of a literature rack really serves a double purpose," he explains. "It not only enables me to see at a glance what literature needs replenishing, but it also serves as a constant reminder of the various lines we handle and a persistent suggestion as to which product need most to be pushed." In the photo above, Reno and his secretary visually inventory the store's literature rack.

NEW—AMAZING time and money SAVER!

**Handy Expando Tube End Expander Eliminates
Coupling and Reduces Soldering Time**

At last! Here's a new method of connecting copper, aluminum and steel tubing. Not only does it cut time and material costs, but it eliminates the coupling which requires fitting and cleaning. A few easy turns of Expando's handle and it quickly expands the tube's end so that it fits within .002 of an inch... and easily slips over the end of the connecting tube. Think of it! One soldering... no coupling... a real time and money saver! Handles tube sizes $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ and $\frac{1}{4}$. Immediate Delivery!



Attention!
JOBBER — SALESMEN
There are a few territories still available. Inquire about yours now! Leads furnished!

Write Dept. CR8

KK
products

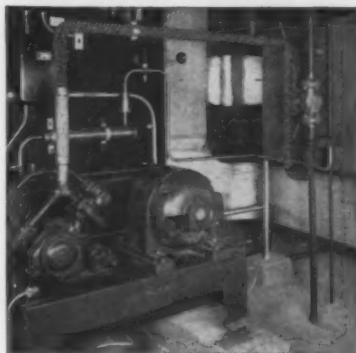
KNUTH ENGINEERING COMPANY
2617 No. St. Louis Ave., Chicago 47, Illinois



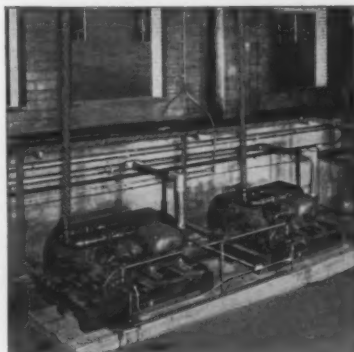
Positively Controls CONDENSATION DRIP

Prevents rust and corrosion, thus prolonging pipe life.

Just wrap cork-filled NoDrip Tape around cold water pipes, suction lines and joints running from refrigerating machines to condensers. Also used on refrigerant lines in air conditioning systems and on cold water pipes in basements.



NoDrip Tape is effective immediately. It can be painted. Clean and easy to put on, without tools, brads, etc.



CONTRACTORS: Include NoDrip Tape protection in your estimates, not only to stop dripping, but for the sake of good appearance on finished installations.

Roll covers about 10 feet of $\frac{1}{2}$ " pipe. \$1.69 list. Higher west of Rockies and Canada.

Order through your supply house or write for information.

J. W. MORTELL CO.

Technical Coatings Since 1895
553 Burch St. Kankakee, Ill.

Sensational NEW

Dual Purpose BERNZ LEAK DETECTOR and LP GAS TORCH

3660°F CALCULATED
TEMP.

"Liquefied
Petroleum



"HIP
POCKET"
Convenience

SAVES

up to two thirds
on fuel costs!

SAVES labor
dollars on
every job!

SAVES time,
effort, energy!

CLEANS OWN ORIFICE
IN 30 SECONDS

NOW, for the first time, with ONE Dual Purpose Torch, you can detect and correct non-combustible refrigerant gas leaks.

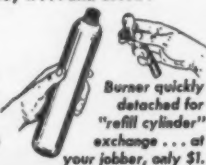
EASY, quick operation. Fully visible flame changes color when these opening comes in contact with leak. Then, without changes or adaptations, you can solder and make sweat fittings.

IN EVERY WAY the economical Bernz Leak Detector and LP Gas Torch cuts time and effort in HALF. Lights instantly, operates in any position, fits pocket or tool kit. No heavy tanks or tangling hose—perfect for service calls. Try it... buy it... and SAVE!

ICC Approved

WL 2½ lbs. filled

Interchangeable,
adjustable burners



ORDER THROUGH YOUR JOBBER
Write for Literature

OTTO BERNZ CO. INC.

Since 1876 "Always Reliable"

Dept. F-1 280 Lyell Ave., Rochester 6, N.Y.

TORCHES • FIREPOTS • MECHANICS TOOLS



JUDGING A CONTEST is a serious matter, you can readily see from the expressions of these business paper editors whose job it was to pick 1500 winners from more than 13,000 entries submitted in Bonney Forge & Tool Works' "Mechanics' Jack-Pot Contest". Standing (l. to r.) are: Paul L. Dumas, "Implement and Tractor"; E. S. Sanderfer, Bonney advertising manager; Charles B. Rawson, "Commercial Car Dealer". Seated are W. K. Tolboidt, "Motor Service", and T. T. Quinn, "Commercial Refrigeration & Air Conditioning".

ATLANTA MAN A WINNER IN BONNEY CONTEST

A refrigeration man—Clarence T. Allen of Engineering & Contractors, Inc., Atlanta, Ga.—won one of the

seven major prizes in the \$5000 "Mechanics' Jack-Pot Contest" conducted by Bonney Forge & Tool Works, Allentown, Pa. Allen's entry was adjudged the sixth best of all the entries submitted in the contest, and won \$50 for him.

Top award—\$1000—went to Arthur P. Grossman, Puritan Laundry Garage, Omaha, Neb., with other major winners being Donald W. Smith, Bartelsmeyer Motor Co., Mattoon, Ill., \$500; John C. Bukawski, Shen Pen Produce Co., Shenandoah, Pa., and John J. Quirk, Johnny Quirk's Auto Service, Bangor, Me., \$100 each; and Winston D. Helms, Kelley Field, San Antonio, Tex., and Gilbert D. Son, Robinson Implement & Motor Co., Princeton, Ky., \$50 each.

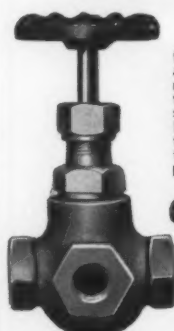
In addition to the seven top award winners, there were 1500 other prize-winners, including a number of mechanics from the refrigeration and air conditioning industry. The first 100 of these received \$15 tool purchase certificates, the next 400 received Zenel wrench sets, and the remaining 1000 were awarded handsome Bonney tie clasps.

More than 13,000 entries were submitted in the contest, and selection of the ultimate winners was made more difficult because of the superior quality of most of the entries.

SHANK

REFRIGERATION PRODUCTS

Recognized as the
Symbol of Quality!

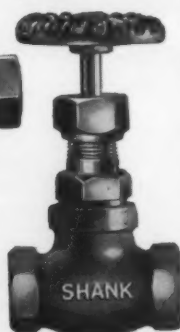


Semi-Steel
Shut-Off Valve

Highest grade non-porous metal—full size ports—clean cut threads. Back seated stem—Shank design base—perfect alignment. Long life packing ring.

3-Way Dual
Shut-Off Valve

For use where Refrigeration Codes require dual relief valve installations. Stainless steel stem. Indicator plate on hand wheel shows position of valve shut-off. Completely rust-proofed.



IF YOUR JOBBER DOESN'T STOCK—
WRITE

CYRUS SHANK CO.

631 W. Jackson Blvd.

Chicago 6, Ill.

BUY FROM YOUR
REFRIGERATION WHOLESALE

Be sure to specify

The New Bush Comfort Conditioner

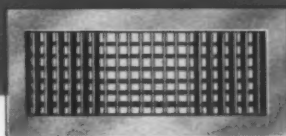
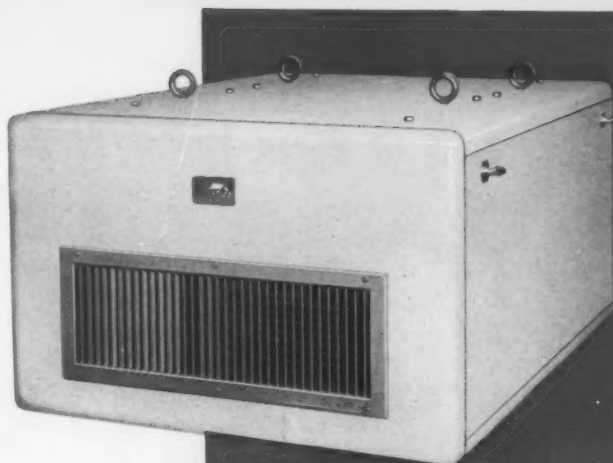
FOR CUSTOMER SATISFACTION



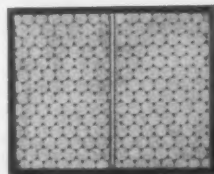
BUSH Comfort Conditioners are expertly engineered to furnish better air conditioning at low cost . . . that means new customers and more profit for the dealer. They're especially designed to afford easy installation and servicing . . . that's good news for contractors and service engineers.

The BUSH Comfort Conditioner is a ceiling-mounted unit . . . conserves valuable floor space. The condensing unit can be placed in the basement or any other location away from the air conditioned area — thereby eliminating noise. If the business location should change, the BUSH Comfort Conditioner can be easily moved: merely unbolt from the ceiling and pack along the condensing unit . . . you can move the air conditioning as you would a piece of furniture.

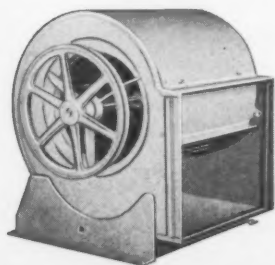
Investigate the BUSH Comfort Conditioner today; you'll be glad you did.



DISCHARGE GRILL — Two-directional discharge grill allows for wide variety of air distribution.



FILTERS — Throw-away type filters are available for all units. All filter sections have a flange for attachment to ductwork.



BLOWER WHEEL AND BEARING ASSEMBLY — Balanced forward-curved wheel and neoprene-encased bearing assembly provide smooth performance and long life.



INSULATION — All cases are insulated with thermal-acoustical material for quiet operation and insurance against condensation on casing.



BUSH MANUFACTURING CO. • WEST HARTFORD 10, CONN.

Buy the Best — and the Best is Bush

and AIR CONDITIONING • AUGUST, 1950

BUILD YOUR BUSINESS UP

by keeping compressor troubles DOWN

with
**TEXACO
CAPELLA
OILS**

Whether you're a distributor, dealer or service engineer, your business—and profits—depend on customer satisfaction. *Texaco Capella Oils* assure clean, efficient, trouble-free compressor operation.

Texaco Capella Oils are highly refined to remove impurities that, in ordinary oils, cause gumming and sludging. They have exceptional resistance to oxidation, exceptional stability, and very low pour tests. In addition, they are moisture-free, and do not react with refrigerants.

You can get *Texaco Capella Oils* in proper viscosities for every type and size of compressor . . . in sealed 1-qt., 1-gal. and 5-gal. containers. Leading compressor manufacturers approve *Texaco Capella Oils*.

Let *Texaco Capella Oils* help you build more profitable business. The Texas Company, 135 East 42nd St., New York 17, N. Y.



TEXACO Capella Oils

FOR ALL AIR CONDITIONING AND REFRIGERATING EQUIPMENT



THE PRACTICAL Refrigeration Applications MANUAL

... by Harold Smith

THE Practical Refrigeration Applications Manual extends a helping hand to those refrigeration and air conditioning men who occasionally encounter field engineering problems too tough for them to handle. Space limitations make it impossible to give complete detailed information covering each step necessary for the installation or erection of refrigeration equipment, insulation or fixtures. It is necessary to assume that those readers who request assistance with their problems are familiar with these basic fundamentals. If they are not, it is suggested that they seek this advice from their sources of supply when purchasing the materials which they intend to use on the job. Most suppliers are equipped to furnish such information. Readers are urged to submit their problems to this department. Each letter of inquiry will be answered personally by the author. The most interesting ones will be published in these columns. All problems should be clearly and completely stated and addressed to: COMMERCIAL REFRIGERATION AND AIR CONDITIONING, Manual Dept., 1240 Ontario St., Cleveland 13, Ohio.

PROBLEM

"WE WOULD like some information relative to the shape of a coil for the following application:

"We wish to make a soft drink cooler to be used at a picnic. The tank is a 7½ foot circular galvanized stock tank. The depth of the water will be approximately 18 inches. The heaviest load will be in the evenings and will last three to four hours.

"The coil will be made of ½-inch tubing. The unit will be a ¾-horse, Freon 12, medium temperature. The unit will be pumped down and stored with the coil disconnected.

"The initial cooling of the water will be boosted by the addition of ice.

"We would like to know whether the coil should be placed vertically in two sections or soldered to a copper plate which would lie on the bottom of the tank. We would also like to know what kind of refrigerant control would be best for this type of application.

"We will sincerely appreciate any information you may give us."

SOLUTION

THERE are several ways that an installation of this kind can be

handled. One is to use a continuous coil of copper tubing to be placed inside the tank and in the water bath. This coil could be wound in any diameter you may select. It would seem to me that to get efficient cooling you should have from 150 to 200 feet of ½ inch coil.

It would also be possible for you to use 3 bank coils in the water bath, one placed through the center of the tank setting vertically and the other two spaced as desired parallel to the center coil. These could be hooked up in a series feeding into one coil from another.

Where coils of this type are used, we would suggest a coil made along the line of an air cooled condenser or perhaps coils such as are used in refrigerated display cases. Coils of this kind can be made up by manufacturers to any dimensions the customer specifies so you can discuss this matter with your source of supply to secure the coils needed, if you prefer to use bank coils rather than bare tube coils.

If you plan to disconnect the condensing unit from the coil after each usage, it will be necessary for you to seal both the liquid line and suction line tight when disconnecting the condensing unit. The valves on the condensing unit will cover this situation satisfactorily on that end of the equipment but unless the coils are plugged up tight considerable air and moisture will get into the system which will interfere with satisfactory operation.

The coils should be pumped down before the condensing unit is disconnected from the coils. When it is hooked up the coil should be thoroughly purged out after connecting it up but before starting to operate to eliminate any air or moisture that has gotten into the line.

It would be far more satisfactory for you to try to place this equipment where it could be left permanently rather than to attempt to disconnect it each time, if such a thing is possible.

If a bare tube coil is used we would arrange it similar to the way they are often set up in beer cooler draft boxes or in milk coolers rather than to solder the coil on the bottom of the tank. A coil on the bottom of the tank is subject to abuse and may become broken or creased to the point that it will lose its efficiency.

NEW N. Y. SKYSCRAPER HAS "ROOFTOP" SYSTEM

New York's newest skyscraper, the Massachusetts Mutual Life Insurance Co. Building, will be completely air conditioned by means of a rooftop installation of the new Carrier steam-operated absorption machine.

Four of the recently developed refrigeration machines, located atop the 27th floor of the building now rising at 600 Fifth Ave., will employ district steam taken from the street mains to produce chilled water for the air conditioning system. All outside rooms will be served by the Conduit Weathermaster system.

The Massachusetts Mutual installation will be self sufficient so far as any continuing water supply from outside sources is concerned. Make-up water for the cooling tower, replacing losses due to evaporation, will be recovered in more than sufficient quantity from the steam condensate.

Each of the four absorption machines for the new building will have a capacity of 275 tons. These are the first units to be produced with a capacity beyond 200 tons, and similar models will range up to 350 tons.

SEEGER EARNINGS UP

Net earnings of Seeger Refrigerator Co. in the nine months ended May 31, 1950, were \$3,873,368 after provision for state and federal income taxes, compared with earnings of \$2,742,841 in the corresponding nine months a year before. Earnings were equal to \$3.52 a share compared with \$2.49 a share in the comparable nine months of the preceding fiscal year.

The World's Most Efficient

CONCRETE DRILL

THE TILDEN ROTARY KONKRETE KORE DRILL

gives lowest cost per foot of concrete drilled because it:

- Drills at 2 to 6 inches per minute
- Drills reinforcing bars and beams in concrete
- Drills up to 30 feet of concrete without resharpening
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- Uses ordinary electric drill

Quiet cutting action gives minimum disturbance of surrounding activities.

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Tilden drill bits are available in standard sizes of from 1/4" to 4" diameters. Quotations on larger sizes on request.

Write today for catalog

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TILDEN TOOL MANUFACTURING COMPANY
1985 NO. FAIR OAKS, PASADENA 3, CALIFORNIA

Reoperate Valve Plates and Pistons in Minutes!

with
**Amazing
New
PREMIER
KIT**

Save up to
90% in
Time and
Money!

Yes, this amazingly low-priced **PREMIER** Self-Aligning Valve Grinding Kit makes it easy for any refrigeration service man to grind, finish and test recessed or flush valve seats in little more time than it takes to read this ad! No more tiresome hand lapping. Pays for itself in reoperating as few as six valve jobs! Compactly packed in handy case for easy handling.

THE PREMIER CO.
891 PARK AVENUE - BALTIMORE 1, MD.



Over the COUNTER

SALISBURY BRANCH OF ROCHE & HULL OPENED

Customers and friends of Roche & Hull, Inc., helped that wholesaler celebrate the opening of a new branch store in Salisbury, Md., early in June. The branch, located at 607 E. Church St., Salisbury, is being managed by Kenneth Anderson.

Attending the opening were refrigeration and heating contractors, service men, and representatives of the various manufacturers whose products Roche & Hull distributes. Refreshments were served from 10 a.m. to 5 p.m.

Roche & Hull men at the opening, besides Anderson, were George J. Roche, William Thomas, and James Travis.

Roche reports that the customers who were present showed much interest in the new store operation, and pledged their support to it. The branch occupies both first floor and basement of the building, and is designed to provide faster service to customers of the company in the Del-Mar-Va peninsula area.

HANDLES CUTLER-HAMMER IN NEW JERSEY AREA

Cutler-Hammer has announced the appointment of Tesco Distributors to handle its line of commercial and household refrigeration controls in northern New Jersey.

In addition to its main office in Newark, Tesco's branches at Union City, Paterson and New Brunswick will handle the complete Cutler-Hammer refrigeration control line for service to users in this area.

**BUY FROM YOUR
REFRIGERATION WHOLESALER**

RUNS ROCHE & HULL BRANCH

Kenneth Anderson (right) is manager of Roche & Hull's new Salisbury, Md., branch, exterior of which is shown below. The branch will serve the Del-Mar-Va peninsula area.



AUSTRALIAN JOBBER OPENS NEW BRANCH



Ample parking space, even though located virtually in the heart of the city, is a key feature of the new Adelaide branch of F. C. Lovelock Pty. Ltd., Australian wholesaler of refrigeration equipment and supplies. Designed especially to be of service to the company's South Australian customers, this small but efficiently organized store is located at 21 Compton St. These photos show both exterior and interior views of the new branch.



PREFAB HARDENING ROOM SOLVES SPACE PROBLEM

Faced with the need for an additional ice cream hardening room but lacking space for it in its building, Kentucky Ice Cream Co. of Richmond, Ky., made strategic use of one of the "Metalply" prefabricated sectional hardening room produced by Reco Products Div., Refrigeration Engineering Corp.

A platform was built outside the building but adjoining the room where final handling of the ice cream takes place. The prefab unit, measuring 12 x 28 x 8 feet and incorpo-

rating 8 inches of insulation, was installed on this platform.

To save as much time and labor as possible, a conveyor was built to run from the main building into the new "external" hardening room.

NAMED DISTRIBUTOR

Appointment of Tesco Distributors of Newark, N. J. as distributors of Kelvinator repair parts and commercial equipment was announced by Keith L. Saunders, manager of Kelvinator's New York zone office.

USING more refrigeration is part of the formula for ensuring a better grade of fresh spinach on the grocers' shelves, according to the U.S. Department of Agriculture.

Proper mechanical cooling, combined with longer spinning in the centrifuge dryer, the department's research indicates, can go a long way toward controlling bacterial soft rot and lengthening the shelf life of the washed and trimmed product.

The research also revealed that the type of wrapping used in the self-service merchandising of fresh spinach had little effect on the product's shelf life.

1. Large "Full-Flot" seat area.

2. Smart new styling.

3. 1½ turns to open or close valve.

4. Stem sealing disc of molded nylon.

5. Perfect control of diaphragm.

6. First prize for showest but best in the show.

● Over-all height approximately 3 inches.

● Ports-In-Line style.

● Permanently protected in individual, strong, metal edge cartons.

you will like the
Streamline
DIAPHRAGM VALVE
Because



This sturdy, compact packless line valve has "built-in" long life. The large metal diaphragms have been pressure-tested through over 100,000 complete cycles without a failure.

Designed with Refrigeration service in mind, the oversize seat area practically eliminates pressure drop.

The molded nylon stem disc, tough yet resilient, affords positive shut off with extremely light closing pressure.

A neoprene cushion Back-seal prevents stem seizure and gives double "no-leak" protection with the valve in full open position.

Flared end connections are of sufficient height to allow ample wrench clearance when mounting.

ORDER FROM YOUR WHOLESALE

MUELLER BRASS CO.
Port Huron, Michigan

THEY ALL BOOST PROFITS

Unexcelled replacement parts and hermetic servicing equipment which help you to diagnose compressor troubles quickly and easily. . . . Eliminate costly call-back service. . . . Insure customer satisfaction.



CYLINDER VANES ROTORS

Matched set of tool hardened replacement parts for all Coldspot compressors having 15/32 shafts. Available in sizes 1", 1 1/4" and 1 1/2". Prices for complete sets. Lots of 1—\$13.50 ea. Lots of 3—\$12.83 ea.



CHECK VALVES

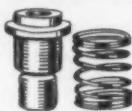
Job proved Coldspot replacement check valves.

Price—\$2.00 ea.

Lots of 10—\$1.80 ea.

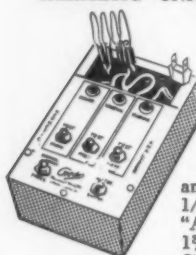
BELLOWS SEAL

Outstanding bellows seal replacement unit for Coldspot having 15/32 shaft. A complete unit of siphon bellows balanced seal and steel coil spring. Price—\$3.00 ea.



Lots of 10—\$2.85 Lots of 50—\$2.70

HERMETIC UNIT ANALYZER



"Annie", our hermetic unit analyzer will quickly and positively indicate the nature of any defects in the electrical system.

"Annie" is designed to check and start units up to 1/3 H.P. inclusive. "Annie" weighs only 1 1/4 lbs.

Size 3"x5"x8".

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TAPALINE HERMETIC GAUGE PORT

An easy to install permanent gauge port on hermetically sealed units. Available in 3 sizes to fit 1/4"—5/16"—3/8" tubing. (Patent applied for.)

Price \$1.25 ea.



For service on your needs order from your dealer or write direct.

Your free copy giving complete details is available, write today for bulletin CR-1.

**MECHANICAL REFRIGERATION
ENTERPRISES**

DEPT. 36 5032 LANKERSHIM BLVD.
NORTH HOLLYWOOD, CALIF.

78

IF THERE'S comfort, including the latest in air conditioning, in being ill, the G. I.'s will have it in the new Veterans Administration Hospital which has just been opened in the Fort Hamilton section of Brooklyn.

The new 16-story hospital is built along the general lines of the United Nations building, now nearing completion in New York City, and is so laid out that 95 per cent of the 1000 beds will have maximum sunlight and southern exposure.

The first 125 patients were admitted to the hospital in February, even though it will be several months before the building will be completed, and they are already enjoying the benefits of four carloads of United States Air Conditioning equipment.

This equipment includes 54 blowers, handling from 1500 to 40,000 cfm each, and ranging in size from 12-inch wheel diameter to 72-inch wheel diameter; 90 unit heaters; 3 dehumidifying units and 120 sections of heating and cooling coils. The equipment was sold by Air & Heat Co., New York City, and was installed by Jarcho Bros., Inc., Long Island City, heating and ventilating contractors.

Precision Made EXTERNAL REPLACEMENT TERMINAL

NO STAMPINGS



**NEW LOW
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\$3.50**

Per Set of 3

**TRY
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ONE**

For All Models

and see the difference

Each and every part is machined to tolerances of micro-measurements.

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See Your local jobber for sealed unit parts

Manufactured by
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Strainer Capillary Float Replacements
combinations for Check Valves
all sealed units Strainers

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TO COME"

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261 EAST 161st STREET NEW YORK, N. Y.

INFRA INSULATION OFFERS FREE USE OF TEST DEVICE

Two weeks free use can be had of a specially designed heat flow testing device, with which anyone even without the least technical training—can test the performance of various kinds of thermal insulation. Any builder, engineer, insulation contractor, or building supply house, may obtain the heat tester merely by writing for it. There is no charge or other obligation; no responsibility in case of damage to it.

This offer is made by Alexander Schwartz, president of Infra Insulation, Inc., to help expand definite knowledge about heat and vapor movement and other facts and phenomena related to thermal insulation, and to eliminate numerous misconceptions. Schwartz, whose "Simplified Physics of Thermal Insulation" is used as a text in numerous educational institutions, feels that the points he makes in his booklet are much more readily grasped when accompanied by visual and tactual demonstration.

While light in weight and compact, the testing device is solidly constructed. All that is necessary when it arrives is to remove it from the carton, stand it on a desk or table, plug it in, switch on the heat bulbs, and begin testing the various forms of insulation which are provided, and any other insulations one may have. Simple instructions and suggestions are furnished.

The device tests for down-heat-flow, up-heat-flow, and transverse-heat-flow, as in walls.

To get a tester for two weeks free use, write to Mr. C. R. Michaels, Infra Insulation, Inc., 10 Murray Street, New York, N. Y.

MICHIGAN OUTLET NAMED FOR REMINGTON COOLERS

Temp-Matic Wholesalers, Inc., Detroit has been appointed Michigan distributor for the Remington line of window and console type room air conditioners, according to Al Frederick, Temp-Matic general manager. The company will install, service and guarantee Remington units sold by dealers in the Detroit area.

The company has scheduled a series of promotional and training meetings, where dealers will learn how to sell and size room air conditioning equipment.

ABOUT PEOPLE . . .

Continued from page 39

sales manager of the Whiting Appliance Co., a division of Baltimore Porcelain Steel Corp., Baltimore. The post is a new one and marks another step in the organization of Whiting Appliance Co., which was founded a short time ago after the freezer division of Whiting Corp., Harvey, Ill., was purchased by the Baltimore firm. R. E. (Denny) Densmore, associated with the appliance business for more than a quarter century, remains as executive vice president and general manager of Whiting Appliance Co.

Bernard M. "Bernie" Packtor, well known sales engineer in the refrigeration and air conditioning fields, was recently named sales representative by Kold-Hold Mfg. Co., Lansing, Mich. He will serve the northeastern states with



headquarters in New Haven, Conn. Packtor has had extensive experience in refrigeration and air conditioning. He has been connected with major producers of equipment, and during the war served as a civilian engineer with the Springfield Armory. For the past four years he has been a sales representative for several refrigeration lines.

Elliott R. Hallowell, formerly vice president in charge of engineering for the Alford Refrigerated Warehouses, has been named chief engineer of Snell Refrigeration Supply, Dallas refrigeration parts wholesaler. Hallowell formerly was with Frick Co. and with Central Engineering and Supply Co., Dallas, where he was in charge of engineering.

John L. Busey has been elected a vice president of General Electric Co. and placed in charge of marketing policy, a newly-created post, it was announced by Charles E. Wilson, G-E president. Busey has been president and a director of General Electric supply Corp. Concurrently, William

V. O'Brien, formerly general sales manager of General Electric Co.'s Apparatus Department, has been elected a commercial vice president and has been appointed assistant manager of marketing policy for the company. **Charles R. Pritchard**, formerly manager of marketing for the G-E Appliance and Merchandise Department, has been elected president and a director of G-E Supply Corp. Busey and O'Brien will establish headquarters in New York and Pritchard in Bridgeport.

Louis H. Miller has been appointed manager of marketing of the General Electric Co.'s Appliance & Merchandising Department. **Charles K. Rieger** has been appointed manager of the household refrigerator division, succeeding Miller, and **Robert E. Boian** has been named to succeed Rieger as manager of the heating device and fan divisions.

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REFRIGERATION WHOLESALER**

**ANNOUNCING
Another New...**

**PARmetric
UNIT**



**Model PM-O (1/8 H. P. Static Condenser)
for household refrigerators, etc. . . . another popular
PARmetric sealed unit that can be serviced in the field**

PARmetric Model PM-O and Motor Compressor MC-5 were designed only for use with restrictor tube or other self unloading systems. They feature: Removable dome; extreme quiet; high efficiency; large capacity;

cooler running; no pumping noise and many other outstanding PAR features. Get in on the new or replacement household market now! See your wholesaler for complete details on PARmetric Model PM-O.

BY COMPARISON — YOU'LL BUY PARmetric



SEE OR
COMPRESSORS



PAR
REFRIGERATION
COMPRESSORS



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CANDY & COOKIE
WRAPPING
MACHINES



LYNCH
CORPORATION
PAR COMPRESSOR DIVISION
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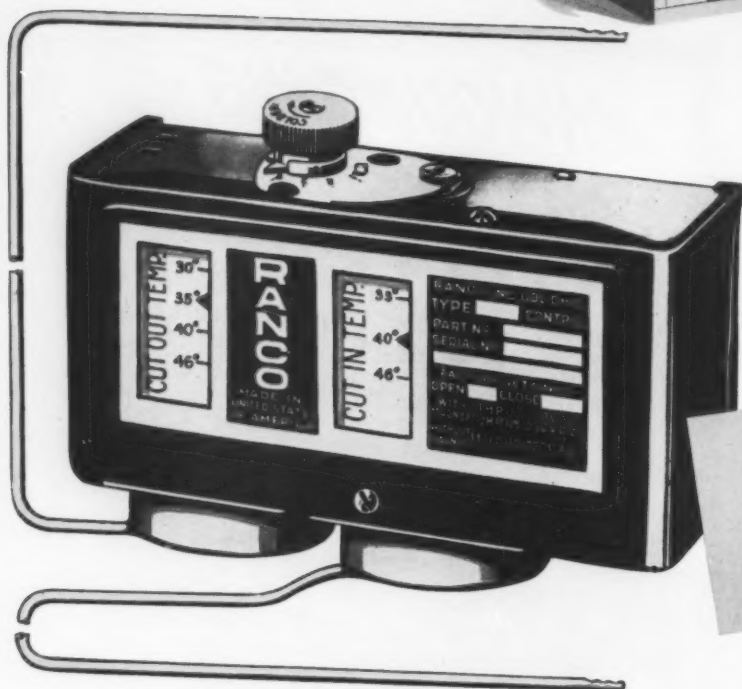


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GLASS FORMING
MACHINES

replace it
right with
Ranco...



**all-automatic
defrosting
with**

**TYPE O-91
"ALL-WEATHER"
CONTROL**

Completely automatic defrosting—regardless of weather, load conditions or cold location of the compressor—helps maintain uniform relative humidity with this Ranco "All-Weather" Replacement Control. The control cuts in only after the coil has been defrosted and cuts out only when a predetermined temperature has been reached in the fixture. Adaptable to either natural or forced convection units in walk-in coolers, display cases, florist boxes and similar temperature range fixtures. Eliminate expensive call-backs . . . increase your profits on every service job. Ask your Ranco wholesaler to show you the complete, precision-built line of Ranco Replacement Controls.

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Ranco FIRST...

- specialists in refrigeration
- dependability
- greater customer satisfaction
- more Ranco controls in use
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- more profit to you

Ranco Inc.
COLUMBUS 1, OHIO



World's Largest Manufacturers of Refrigeration Controls

. . . more than 20,000,000 controls now in use

HERE'S HOW!

Edited by
Warren F. Farr

How to Detect A Frozen Expansion Valve

Here are a few tips on how to detect an expansion valve which has been frozen in either open or shut position due to the accumulation of moisture in the system.

If the job is too warm, if the evaporator is not completely refrigerated, if the unit short cycles, if suction pressure is abnormally low, or if suction line is warm at evaporator outlet—the expansion valve may be frozen shut.

If the system is flooding over, if running time is too long, if suction pressure is either normal or too high, or if there is slugging or pounding at the compressor—the expansion valve may be frozen open.

Once these symptoms have been observed, you can proceed to check your suspicion by one of the following methods:

(1) If compressor is kept off until valve warms up above 32 F, and the valve then controls properly for a short time but goes out of operation again as soon as the job temperature pulls down—*there is moisture in the system.*

(2) If tapping the valve body (being extremely careful not to damage the valve by hammering) starts the job working—*there is moisture in the system.*

More Tips on Checking Refrigerant Charge

Another method of checking a refrigeration system to determine whether or not it is properly charged with refrigerant is to close the liquid line with the head pressure gauge installed. If the head pressure goes up immediately from 5 to 20 pounds per square inch and then remains constant, the system is low on refrigerant.

On commercial systems, close the

REFRIGERATION service men seldom carry portable electric meters for two reasons: expense and fragility.

Here is a quick and accurate substitute, provided the customer will let you temporarily remove all other electrical loads, except the refrigerator, from the kilo-watt-hour meter, which belongs to the power company.

METHOD #1:

If the meter constant (K) is legible (stamped on the revolving meter disc, or on the meter name plate), use the following formula:

$$W = 60 \times K \times N$$

W = watts consumed by the refrigerator.

K = meter constant (watt-hours per turn).

N = meter disc turns per minute.

METHOD #2:

If the meter constant (K) is not legible, first count the disc turns per minute with a 100-watt light bulb only in the circuit, and then count the disc turns per minute with the refrigerator only in the circuit and use the following formula:

$$W = \frac{100 \times N}{n}$$

W = watts consumed by the refrigerator.

N = meter disc turns per minute with refrigerator only.

n = meter disc turns per minute with 100 watt bulb only.

These methods are reliable for d.c. or a.c. regardless of voltage, frequency, phase, power-factor, or ampere capacity of the meter, since the meter "K" constant allows for all these factors.

William A. Schreiber
Troy, N. Y.

liquid line and run the machine for about 5 minutes. Have the room quiet and stop the machine. Open the liquid valve and listen. If the liquid flows through the liquid line fast and then slows down or stops without blowing

gas through the line, you may be sure that there is sufficient refrigerant. However, if liquid rushes through the line for a short while and then gas passes through, the indication is that the machine is short of refrigerant or low on liquid.

Another method that may be employed is to shut off the water line or blanket the air cooled condenser. While the machine is operating, see if a distinct liquid level can be determined in the receiver by a decided difference in temperature, the lower part of the receiver being cooler than the upper part.

Some Check-Points for Water Cooler Diagnosis

If you get a complaint that a water cooler will not run, try checking these few things right off the bat and chances are you'll locate the trouble:

1. Check the fuses and power source to see if electricity is reaching the unit.
2. Check the control, and if it does not operate properly replace it.
3. Check the thermostat, and if it open replace it.
4. Check the capacitor, and if it is open or shorted replace it.
5. Check the transformer, and if it is open-circuited replace it.

Do You Know That . . .

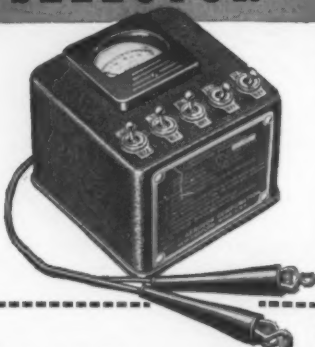
. . . when working on refrigeration compressors for overhaul it is a good idea to discard the oil? It is not good practice to attempt to reuse it. When the running in of a newly rebuilt compressor is completed, the crankcase oil should be completely drained and fresh oil put in. This policy will eliminate small particles of metal and grit rubbed away by tightly fitting parts during the run-in period.

**MOTOR-CAPACITOR
NEEDS can be**

**JIFFY
CHECKED**

with this

SELECTOR



When defective capacitor is not identifiable, simply clip this Aerovox Capacitor Selector in place, flip switches, and read correct capacitance value required.

For emergency operation, clip the Aerovox Emergency Capacitor in place. Plug in necessary sections to total required capacitance value. That gets the motor going FAST.

And at your convenience, replace Emergency Capacitor with permanent Aerovox Exact-Duplicate or Universal Capacitor.

• Ask your supplier for these time- and money-saving service aids. Ask for latest catalog. Or write us.

CAPACITORS • VIBRATORS • TEST INSTRUMENTS



**FOR RADIO-ELECTRONIC AND
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Cable: AEROCAP N. Y. • In Canada: AEROVOX CANADA LTD. Hamilton, Ont.

OPPORTUNITIES

(Classified Advertising)

Rates: for "Positions Wanted," \$4.00 minimum, limit 25 words. For all other classifications, \$4.50 minimum for 25 words or under, each additional word 15¢; headline type or all capitals, \$7.50 minimum for 25 words or under, each additional word 20¢. Box addresses count as five words, other addresses by actual word count. All advertisements in this section are payable in advance.

HELP WANTED

Oldest heating, ventilating and air conditioning firm on Florida's West Coast desires sales manager capable of organizing a superior sales force with thorough knowledge of sales promotion. Company is exclusive G-E and Coleman area distributor of heating and air conditioning equipment. This is a marvelous opportunity for the right man. Combination salary and commission deal. Give full details, personal and occupational, in first letter to company's ad agency: Alfred L. Lino & Associates, Florida Theatre Bldg., St. Petersburg, Fla.

POSITIONS WANTED

Carefully selected group of trained men, graduates of reliable and well established trade school, now available to fill positions in the Radio or Refrigeration field. Willing to travel anywhere. Why not fill that vacancy with an efficient and reliable man. Write Eastern Technical School, 888 Purchase Street, New Bedford, Mass.

FOR SALE

CLOSING OUT INVENTORY—KELVINATOR pressure water coolers—\$150.00. ¼ SERVEL hermetic unit—control—low temperature—\$55.00. 20%—order—balance S.D. F.O.B. FOGEL REFRIGERATOR COMPANY, PHILA., PA.

Precision Made
INSIDE Replacement TERMINAL
for
SEALED UNITS

WHY NOT USE THE BEST

first used and time tested by leading hermetic rebuilders

- LAMINATED BAKELITE dielectric strength 9000 volts
- NEOPRENE RUBBER lathe ground for precision fit
- PLATED STEEL ROD mirror smooth finish
- DIE CUT THREAD plus .0002 minus .001 tolerance
- ALL PARTS GUARANTEED

to be lathe turned—NOT STAMPED

All terminals guaranteed to outlast the unit.

Every part machined to tolerances of micro-measurements.

See your local jobber for Sealed Unit Parts made by Sealed Unit Parts Company

MONEY REFUNDED IN FULL if not completely satisfied
"the first with the finest"



\$2.25
Per Set of 3

For All Models

SEALED UNIT PARTS COMPANY
261 EAST 16TH STREET NEW YORK, N. Y.

D. E. Lawson, director of research for Hupp Corp., Cleveland, has been elected a vice president of that corporation according to announcement. He joined Hupp in 1941.

NO MORE FREEZE-UPS
of expansion valves or capillary tubes!

ICE-X works like magic
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When ice forms in expansion valves or capillary tubes, ICE-X is a sure remedy . . . ICE-X is non-corrosive—harmless to parts. An ice-eliminator that can't be beat for Freon, Carrene, or Methyl Chloride systems . . . Order from your jobber. If no jobber, order direct.



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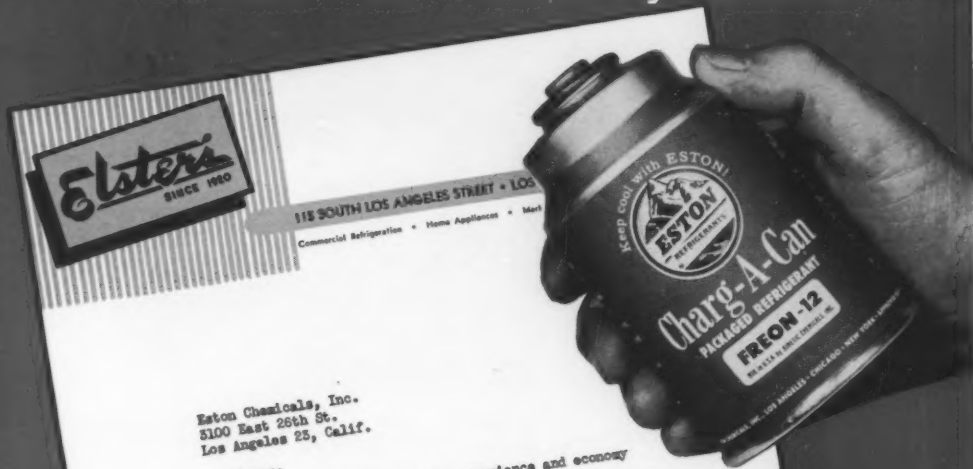
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